

Crypto Applications: 2020–2025

SPEAKER

Balaji S. Srinivasan, Nakamoto.com

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About

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coinbase

CTO, Coinbase

ANDREESSEN
HOROWITZ

General Partner, a16z

Counsyl

CTO & cofounder, Counsyl
Sold to Myriad for \$375M



BS/MS/PhD EE, MS ChemE
Taught Stanford MOOC to
250k+



History

Concepts

Applications: 2020

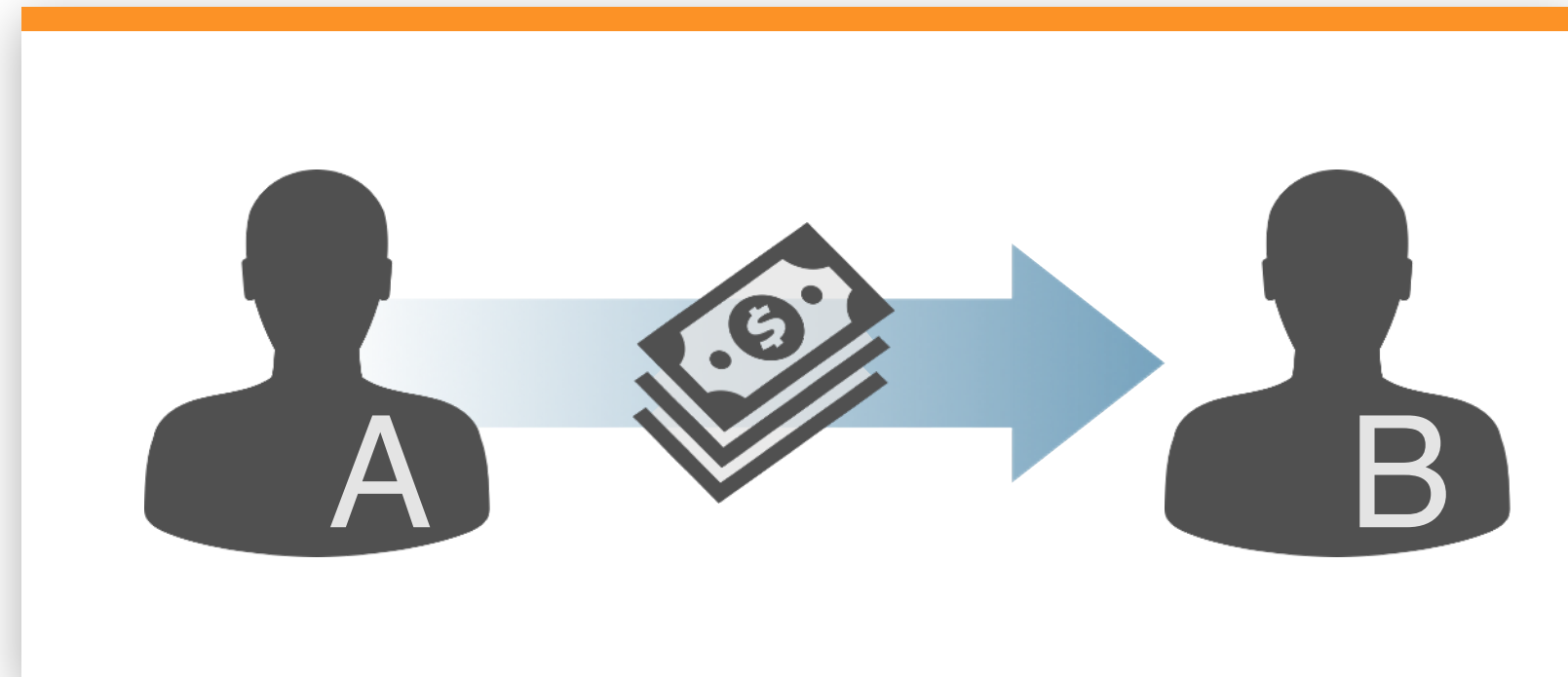
Applications: 2025

First, Bitcoin

What is Bitcoin and why was it invented? We can get there in four steps.

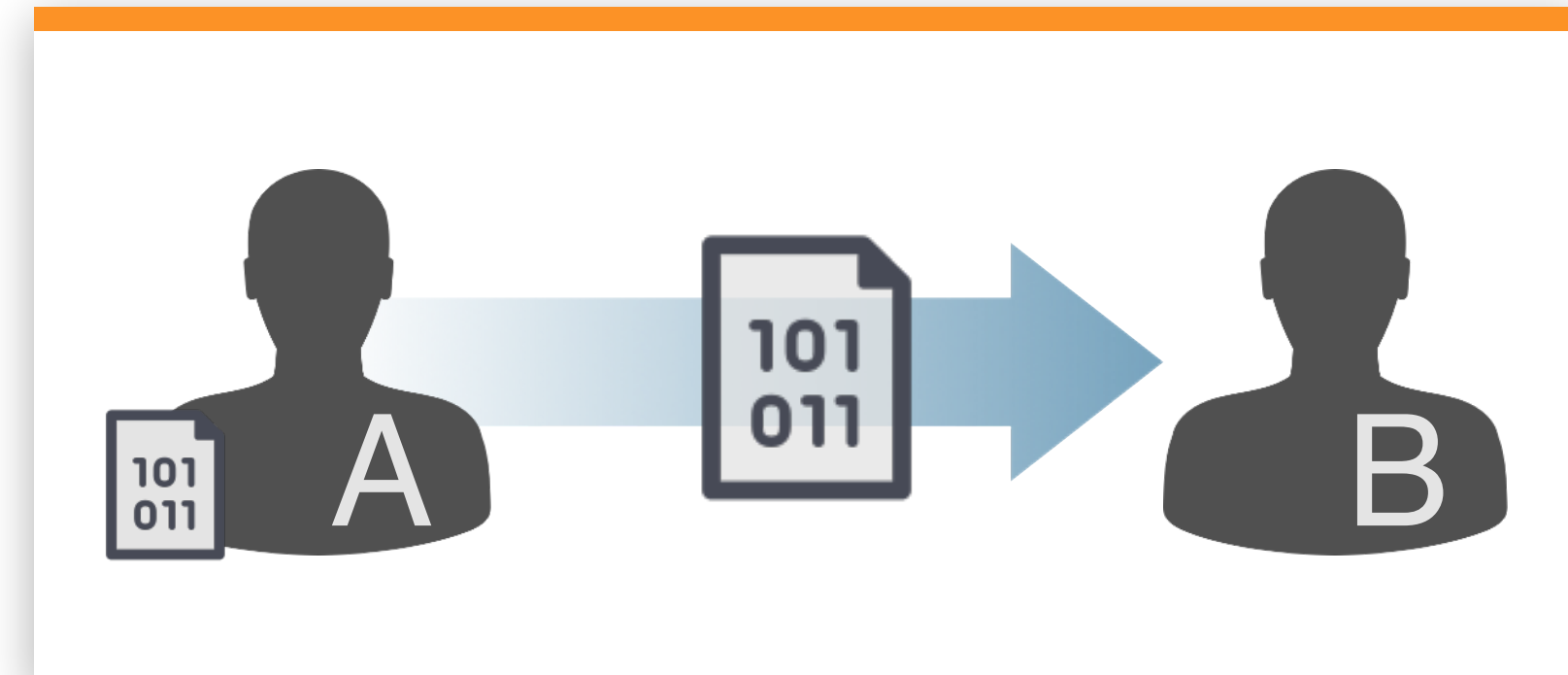
1. PHYSICAL CASH

A hands B cash. B knows A no longer has it.



2. NAIVE DIGITAL CASH

A sends B serial numbers. A still has a copy!



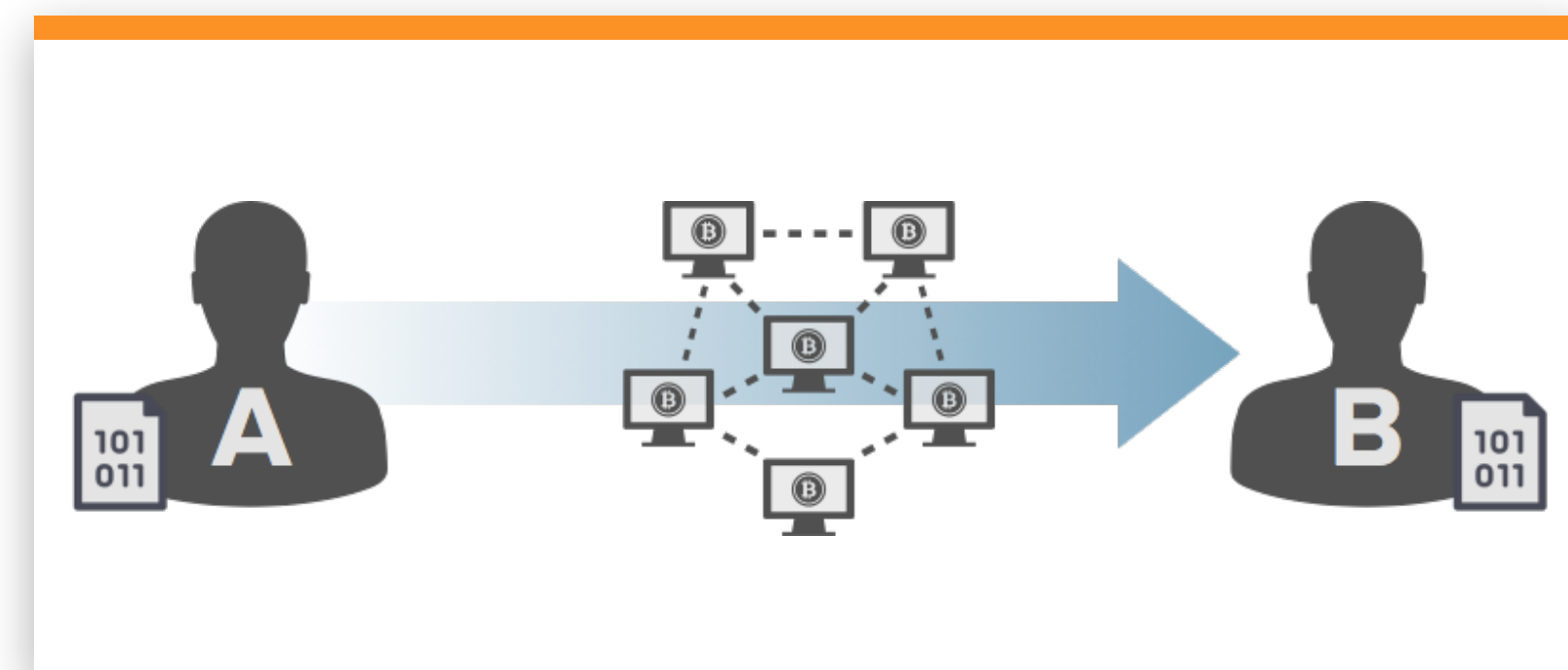
3. CENTRALIZED DIGITAL CASH

C is a bank. It is trusted to debit A & credit B.



4. DECENTRALIZED DIGITAL CASH

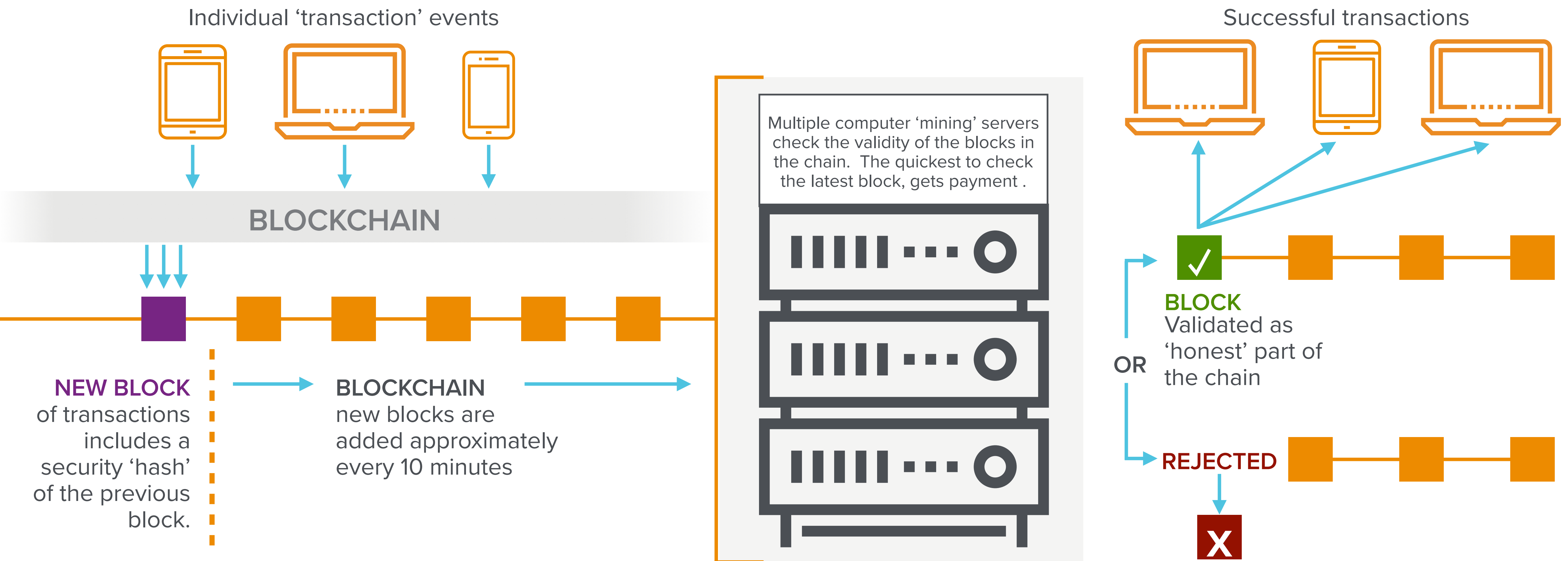
C is replaced by miners updating blockchain.



Then, Blockchain

The fundamental innovation behind Bitcoin.

A blockchain is a tamper-resistant database for storing things of value.



Next, Ethereum

A new blockchain launched in 2014. More programmable than Bitcoin, allows for smart contracts. Led to the ICO boom.



Here's an example of a script in Bitcoin:

```
OP_DUP OP_HASH160 62e907b15cbf27d5425399ebf6f0fb50ebb88f18
OP_EQUALVERIFY OP_CHECKSIG
```

And one in Ethereum's Solidity:

```
contract Simple {
    function() {
        var two = 1 + 1;
    }
}
```

From 2017-2018, the ICO Boom and Bust.

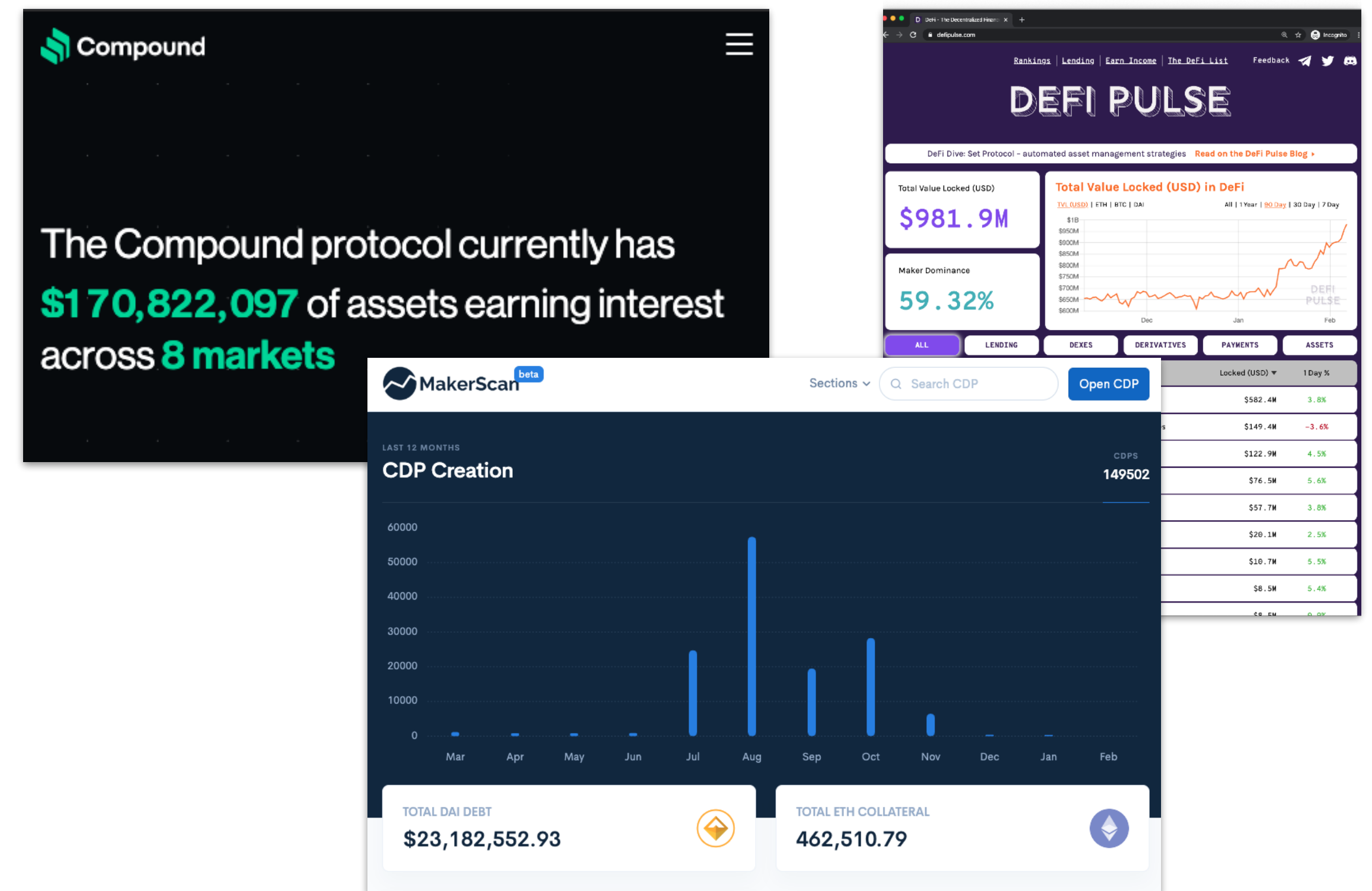
Like dotcom boom, many won't work but some will.

Simultaneous disruption of VC, SWIFT, crowdfunding, cap tables.



2017–2018

From \$XB to \$YB to \$ZB



2019–2020

Winter for price, summer for innovation?

Past performance is not indicative of future results.

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History

Concepts: Technology

Applications: 2020

Applications: 2025

1

A blockchain is a database for storing things of value

Slower and less performant than centralized databases, their special property is tamper-resistant shared state in an adversarial environment.

In other words: can't write to the DB and award yourself a million dollars. Or a million potions, or a million acres.



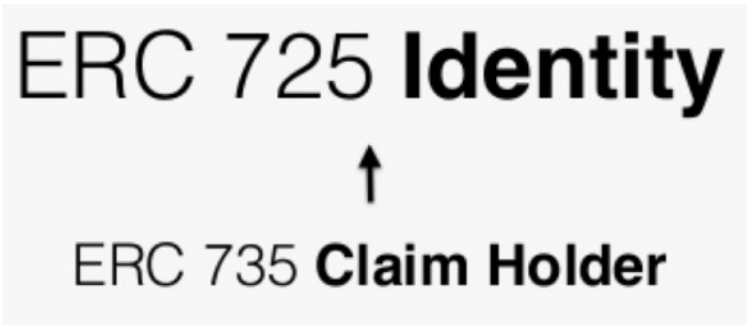
CRYPTOCURRENCY
Digital gold and cash.



TOKENS
Digital alternative to equity.
Makes network effects tradeable.



DIGITAL ASSETS
Nonfungible scarce assets,
from in-game items to real estate.



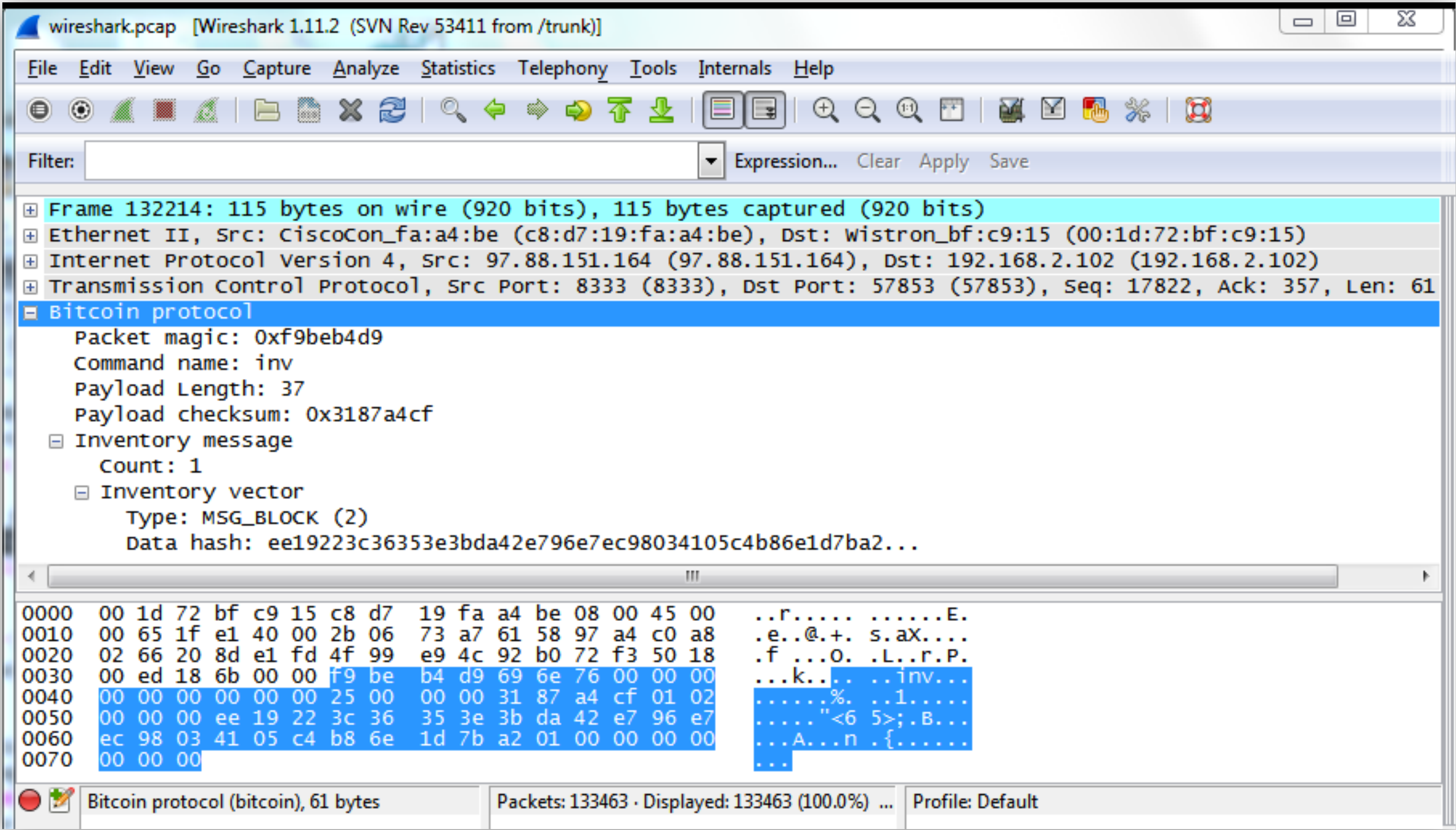
IDENTITY
Present proof of cryptoidentity to
demonstrate that you possess an asset.

2

Bitcoin is a protocol. Payments are now packets.

Bitcoin and Ethereum are literally protocols in that one can open up Wireshark and see the raw packets that update the underlying blockchains.

It's fully packet-driven transmission of value without reference to a bank.



3

This means machines can now hold & send money.

A program can now have custody of funds so long as it has possession of private keys.

The internet allowed programs to autonomously communicate. Blockchain allows them to autonomously transact. A fundamental prerequisite for intelligent agents.

Sending a transaction: tx

I sent the transaction into the peer-to-peer network with the stripped-down Python script below. The script sends a *version* message, receives (and ignores) the peer's *version* and *verack* messages, and then sends the transaction as a *tx* message. The hex string is the transaction that I created earlier.

```
1 def getTxMsg(payload):
2     return makeMessage(magic, 'tx', payload)
3
4 sock = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
5 sock.connect(("97.88.151.164", 8333))
6
7 sock.send(msgUtils.getVersionMsg())
8 sock.recv(1000) # receive version
9 sock.recv(1000) # receive verack
10 sock.send(msgUtils.getTxMsg("0100000001484d40d45b9ea0d652fca8258ab7caa42541eb52975857f96fb50cd732c8b481000000008a47304402202cb265bf1070"))
11
```


4

Blockchains have *already* 10X'd gold, SWIFT, crowdfunding

Is the blockchain creating real economic value? As shown, Bitcoin and Ethereum have already created quantifiable 10X improvements in multiple multibillion dollar sectors.

Deployment still ongoing, but innovation is real and quantifiable.



10X BETTER THAN GOLD
Bitcoin is infinitely lighter than gold. Faster to transport internationally, cheaper to custody.



10X FASTER THAN SWIFT
Ethereum clears in minutes in any country pair. SWIFT takes days .



10X LARGER THAN KICKSTARTER
Ethereum has shattered records, enabling 10X larger and faster internet crowdfunding.



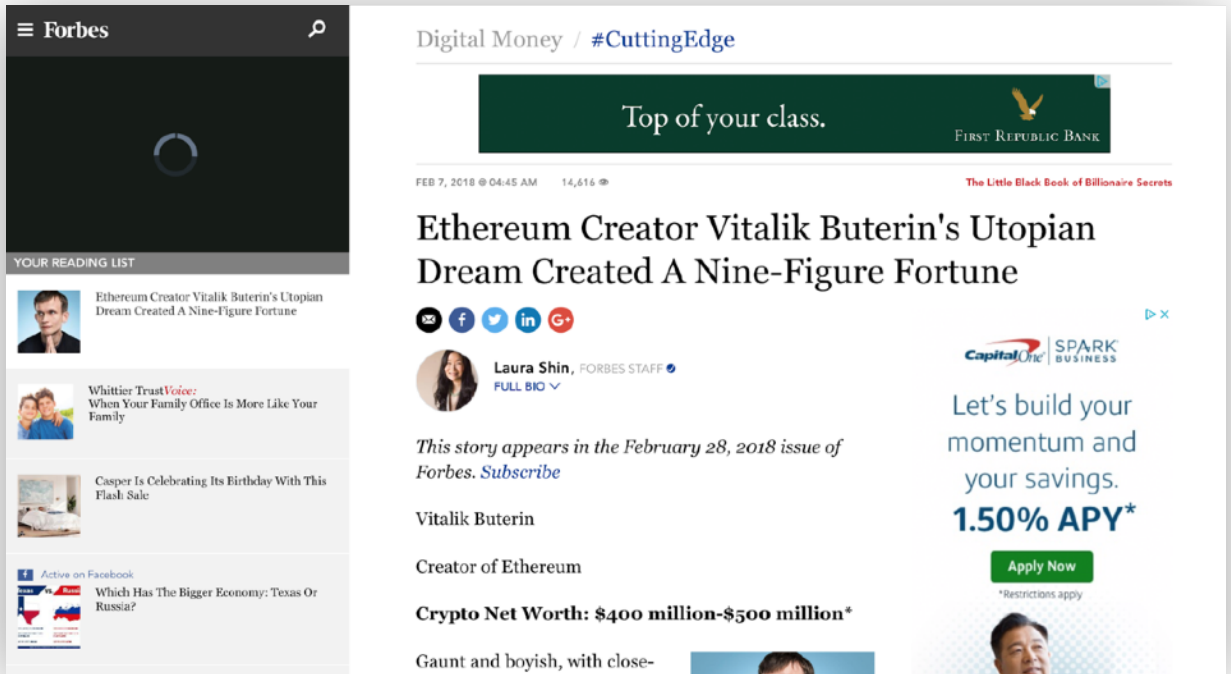
10X FASTER THAN DELAWARE
Solidity means fractions of a second vs days to "incorporate". Smart contracts transform shareholder rights and governance.

5

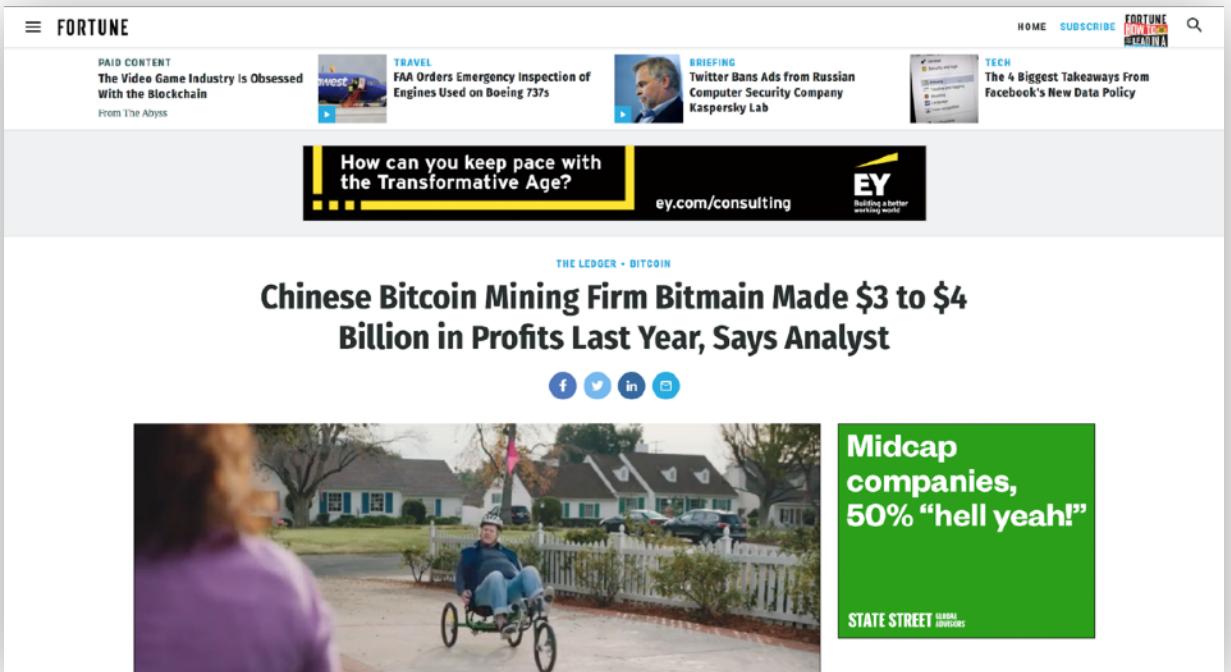
Blockchains have *already* created many billion dollar entities

Are there any large businesses or organizations based on the blockchain?

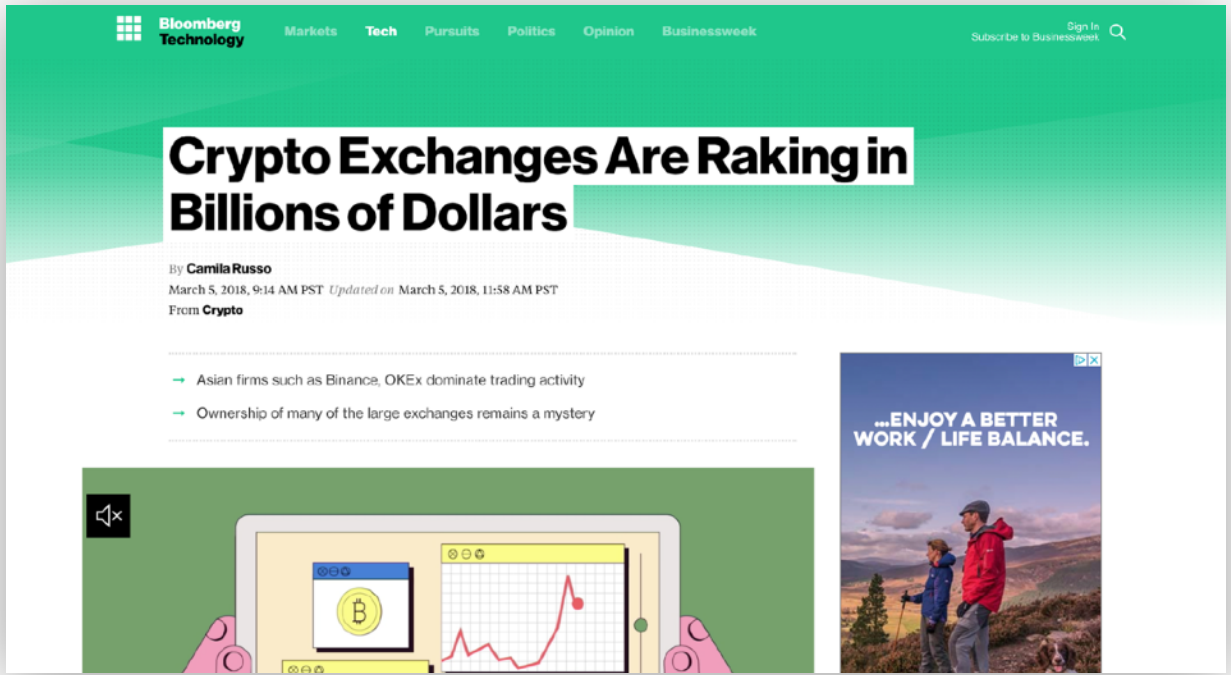
Yes. Infrastructural entities in three major areas are in the billions: creators of new coins & tokens, miners, and exchanges.



COIN FOUNDERS
The engineers who create new coins and tokens have captured billions.



MINERS
The large miners who run server farms have captured billions.



EXCHANGES
The exchanges collectively have done many billions in revenue.

Blockchain means you have a *choice* of who to trust

It's not about "trusting no one", it's about having a greater choice of who to trust with custody of valuable assets.

Blockchains enable choice via fast, programmatic transfer of assets across international boundaries.



BEFORE: BANK

You had to store money at one of a few banks.

coinbase



AFTER: BANK, EXCHANGE, OR YOUR COMPUTER

Now you can store it at the bank, at an exchange, or indeed on any computer.

7

Blockchains enable internet-scale cap tables

With tokens, organizations can now give users a piece of their "cap tables" in a programmatic way.

This is a completely new dynamic and will be widely adopted over the next ten years.

Meetly Detailed Capitalization Table
As of 05/01/2017 • Generated by Mary Stuart (mary@esharesinc.com) at 05/01/2017 05:37:58

Name	Common (CS)	Series Seed Preferred (PS)	Series A Preferred (PA)	Series B Preferred (PB)
Adrienne Williamsen	0	0	0	0
Alexander Wagner	0	0	0	0
Allan Ortega	0	0	0	0
Emily Wilson	2,618,000	0	0	0
Emily Wilson	35,000	0	0	0
Jack Greene	1,228	0	0	0
Jackie Frank	2,628	0	0	0
Jake Pappas	0	180,000	180,000	180,000
James Gillis	2,500,000	0	0	0
Jane Porter	0	0	150,000	220,000
Janet Sugiyama	0	0	180,000	180,000
Jared Firestone	0	0	180,000	180,000

BEFORE: EXCEL
A few shareholders, managed centrally. No custody, poor visibility, limited liquidity till IPO.













Etherscan The Ethereum Block Explorer				
HOME BLOCKCHAIN ACCOUNT TOKEN CHART MISC				
TokenTracker Summary				
Total Supply:	1,500,000,000 BAT (\$588,843,000.00)			
Value per Token:	\$0.3926 @ 0.000449 Eth (▲ 4.29%)			
Token Holders:	54734 addresses			
No.Of.Transfers:	281568			
0xb7f7e572e806bca8...	2 mins ago	0x485e14d149f833...	0xea97abaacddc4e...	10
0x7b613242ce95d2...	6 mins ago	0x0681d8db095565...	0x4ab6483b8c2e91...	477.948

AFTER: ETHERSCAN
Unlimited token holders for even a small startup. Internationally tradeable, transparent, and liquid around the clock from day 0.



Blockchain-first is the new mobile-first









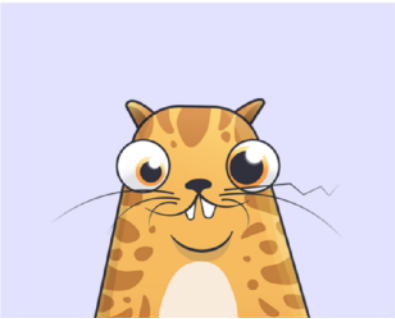






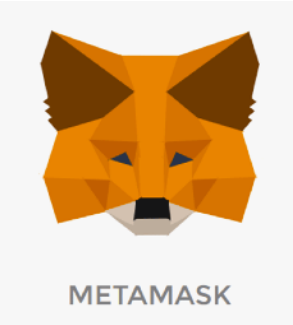


Blockchain competitors are arising for many legacy businesses, and in some cases already taking significant share.

Incumbent						 AngelList
Sample Blockchain Disruptor						
Area	Social	Finance	Precious metals	P2P Payments	Messaging	Equity Crowdfunding

8

And more is coming soon

Next: collectibles, identity, distributed databases, marketplaces, DNS/protocols, browsers, and decentralized cloud.

Incumbent			 WIKIPEDIA The Free Encyclopedia	  Facebook Marketplace			
Sample Blockchain Disruptor					 	 	 
Area	Collectibles	Identity	Distributed databases	Marketplaces	DNS	Browsers	Decentralized file storage

9

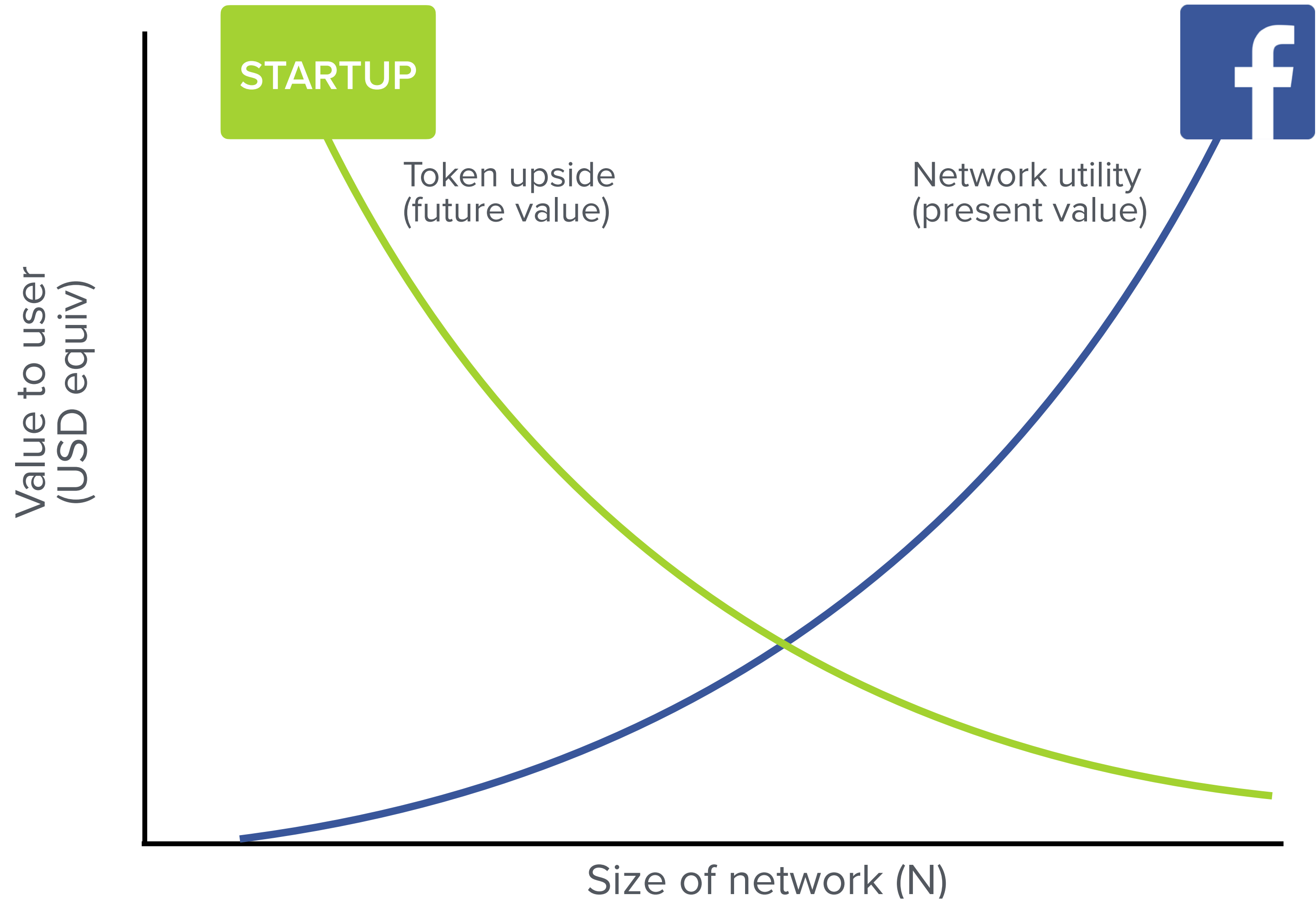
Blockchains break network effects

Why? Because token upside is inversely proportional to network effect.

You can now give early adopters an equity-like stake in the network to reward them for inviting others.

AFTER BLOCKCHAIN:
The smaller the network, the more potential future value for each user

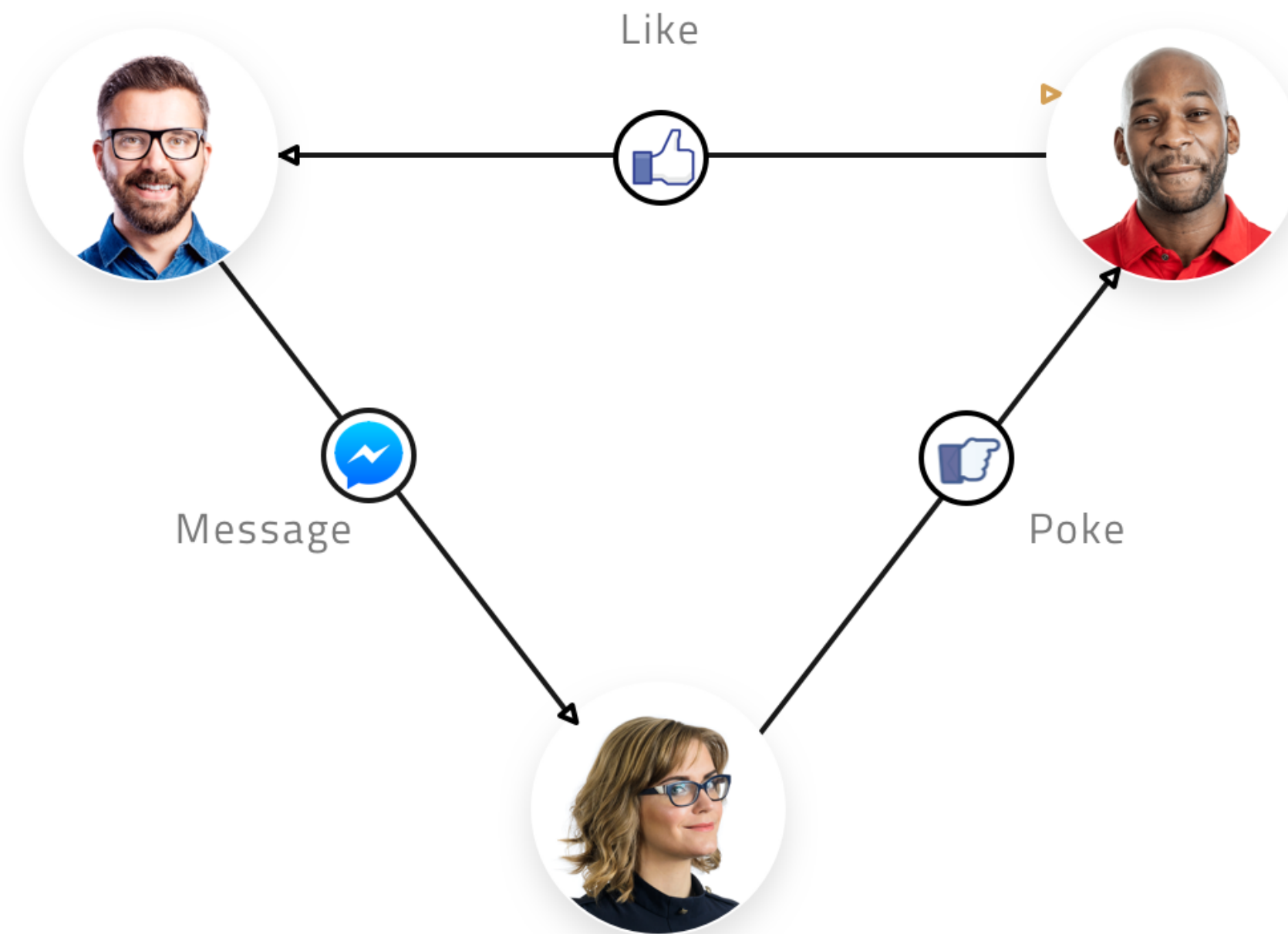
BEFORE BLOCKCHAIN:
The larger the network, the more present value to each user



10

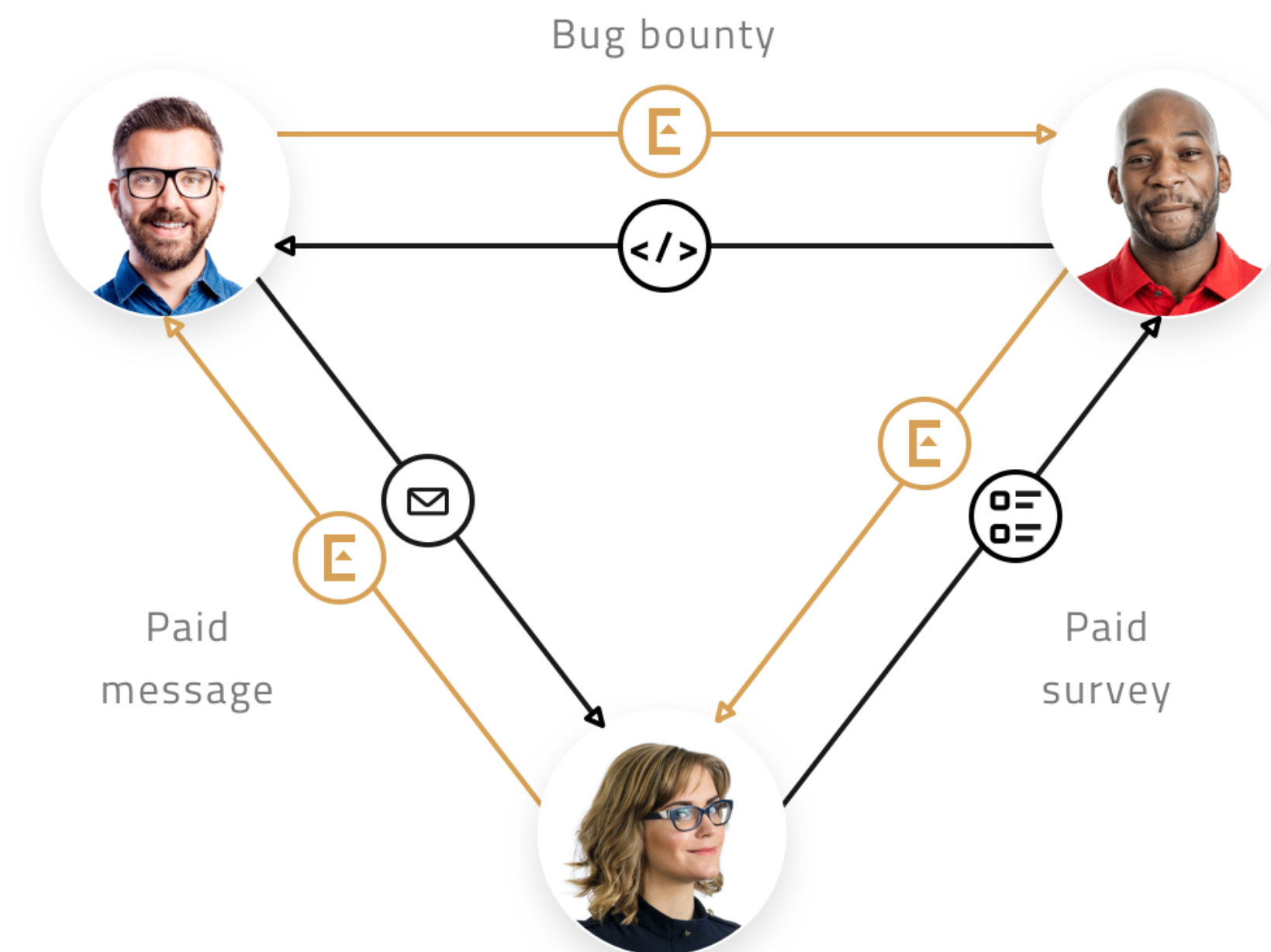
Blockchains transform social networks

From liking and poking to buying and earning. The next 10 years of social networks will involve real value being sent over the edges.



BEFORE: LIKE, POKE, MESSAGE

Have fun online, or waste time. The last 10 years of social networks.



AFTER: PAID DMS, SURVEYS, TASKS

Reply to messages and complete tasks for digital currency. The next 10 years of social networks.

11

Blockchain is a *partial* move away from cloud towards privacy

Users are learning to keep their private keys local and private.

Private keys are an anchor that will lead to other data also being encrypted and moved locally, out of the cloud and onto devices.

OUR PICKS LATEST POPULAR QUARTZ OBSESSIONS

PICKS AND SHOVELS

Ledger sold its millionth hardware wallet for storing Bitcoin



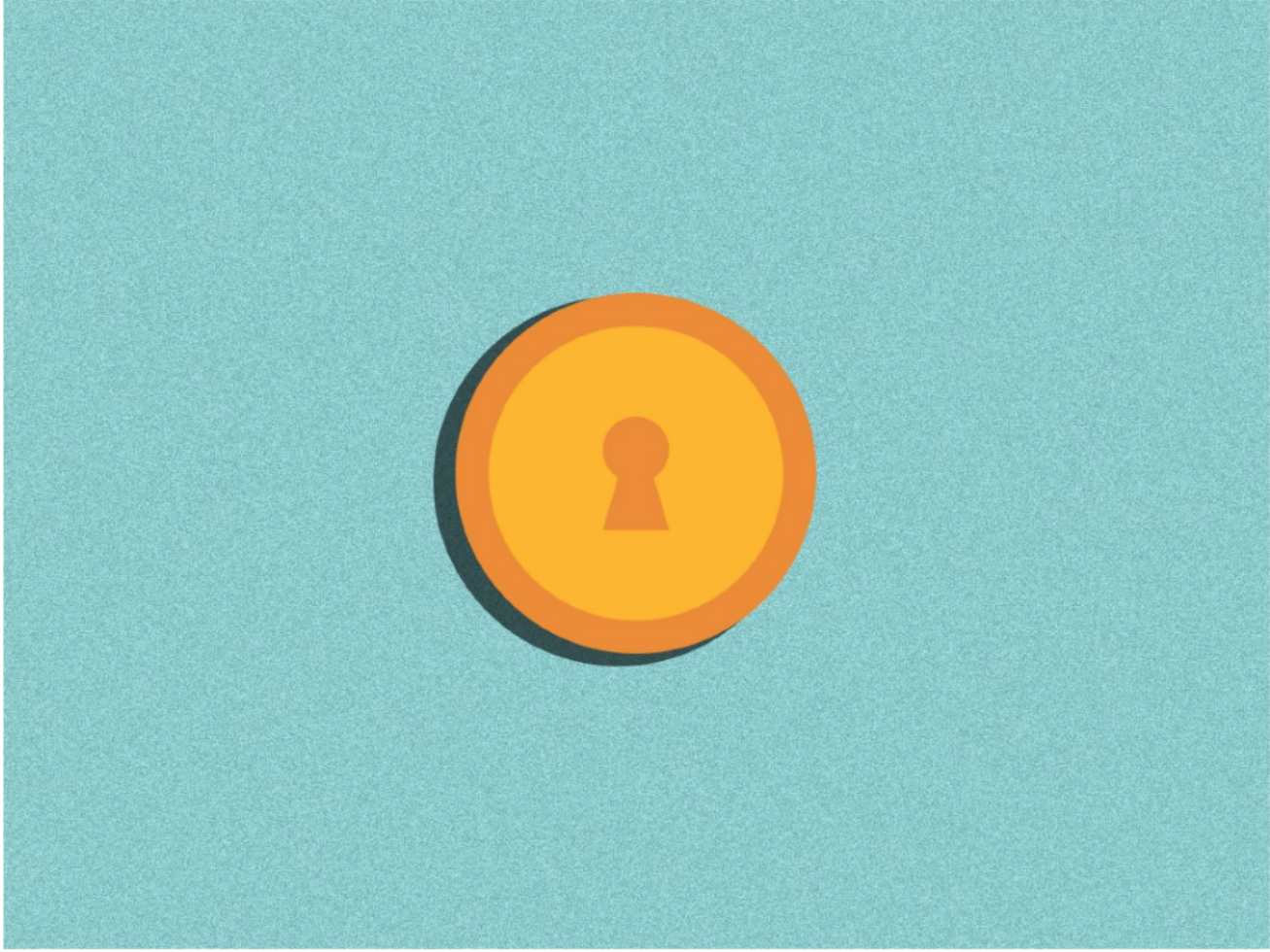
Back to the silicon mine. (Reuters/Dado Ruvic/Illustration)

SHARE

Bitcoin is soaring, but how do you keep th estimates that more than 980,000 bitcoin at current prices, have already been stolen

LILY HAY NEWMAN SECURITY 11.05.17 07:00 AM

HOW TO KEEP YOUR BITCOIN SAFE AND SECURE



HOTLITTLEPOTATO

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History

Concepts: Community

Applications: 2020

Applications: 2025

A blockchain's value derives from its community

Recall our point about how "blockchains scale cap tables". The holders, devs, miners and other community members agree between themselves on mechanisms of value transfer.

The price is how they interface with the outside world.

Making a Bitcoin Maximalist

By Wes Carlson on [ALTCOIN MAGAZINE](#)



Wes Carlson
Oct 25, 2018 ·

Following the hu
cryptocurrency, t
replicate or clone
tokens listed on c
Behind the pleth
profess to be crea
the other. Majori

Ethereum

Find out what's happening in Ethereum Meetup groups around the world and start meeting up with the ones near you.

1,187,955
members

3,864
groups

Join Ethereum groups

Related topics: [Cryp](#)
[Smart Contracts](#) · [Vir](#)
[Decentralized Systems](#)



As context, three random people are *not* economically aligned

Each of them can lose or win on their own, independently, without any impact on the others.



L	L	L
L	L	W
L	W	L
L	W	W
W	L	L
W	L	W
W	W	L
W	W	W

A blockchain community is *economically* aligned

If the price goes up, they all benefit together and can become millionaires. If the price goes down, or the blockchain is attacked in some way, they also all lose.

If they are holders, none of them can win unless they all win.



Bitcoin loses



Bitcoin wins



L

L

L

W

W

W

Blockchains thus take us from slippery slope to crypto cliff

In the slippery slope, one person's rights can be eroded without others facing immediate consequences.

In the crypto cliff, to abrogate one person's rights means you are economically damaging many others at the same time.



BEFORE: DNS SEIZURE

Someone loses a lol.cat domain, but you keep your .com domain.



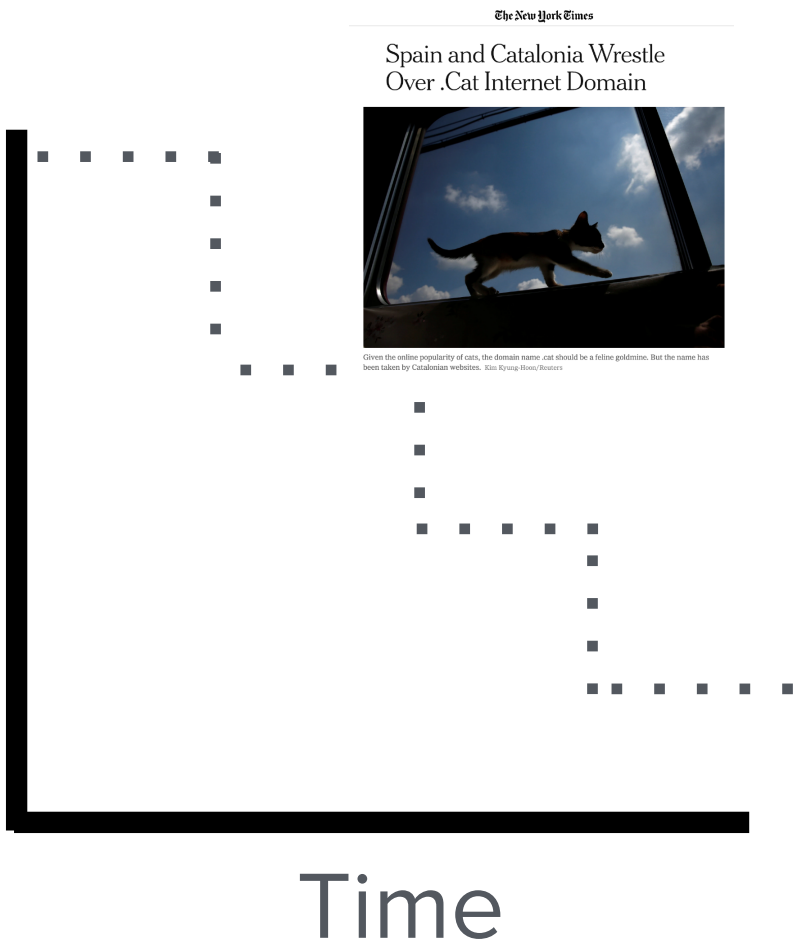
AFTER: ENS SEIZURE

To seize someone's .ens domain in the same way means interfering with the Ethereum blockchain.

Thus, a *monetary* incentive to defend another's rights

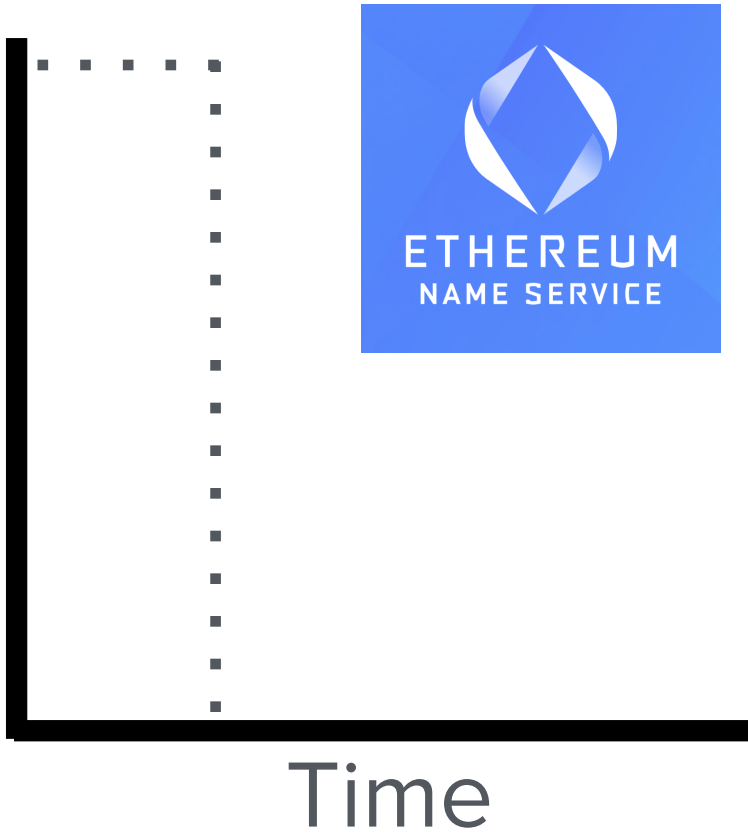
Because of the crypto cliff, everyone speaks out at once if there is the attempt to attack the blockchain that binds the community together.

of individuals with rights



BEFORE: SLIPPERY SLOPE
Someone loses a lol.cat domain, but you keep your .com domain.

of individuals with rights



AFTER: CRYPTO CLIFF
To seize someone's .ens domain in the same way means interfering with the Ethereum blockchain.

As such, blockchains allow for experiments in self-governance

With blockchains, any sufficiently large group of people can choose a mechanism to wholly or partially govern their economic life in the cloud.

This has been a fascination from people of all political stripes, from the Paris Commune to Galt's Gulch.

Medium

Cryptocurrency

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Blockchain Governance: Programming Our Future



Fred Ehrsam [Follow](#)

Nov 27, 2017 · 17 min read

This post describes why blockchain governance design is one of the most important problems out there, its critical components, current approaches, potential future approaches, and concludes with suggestions for the community.

Why Blockchain Governance Matters

As with organisms, the most successful blockchains will be those that can best adapt to their environments. Assuming these systems need to evolve to survive, initial design is important, but **over a long enough timeline, the mechanisms for change are most important.**

As a result, I believe **governance is the most vital problem in the space.** Other fundamental problems like scalability are arguably best approached by using governance to set the right incentives for people to solve them. Yet little research has gone into governance and it feels poorly understood.



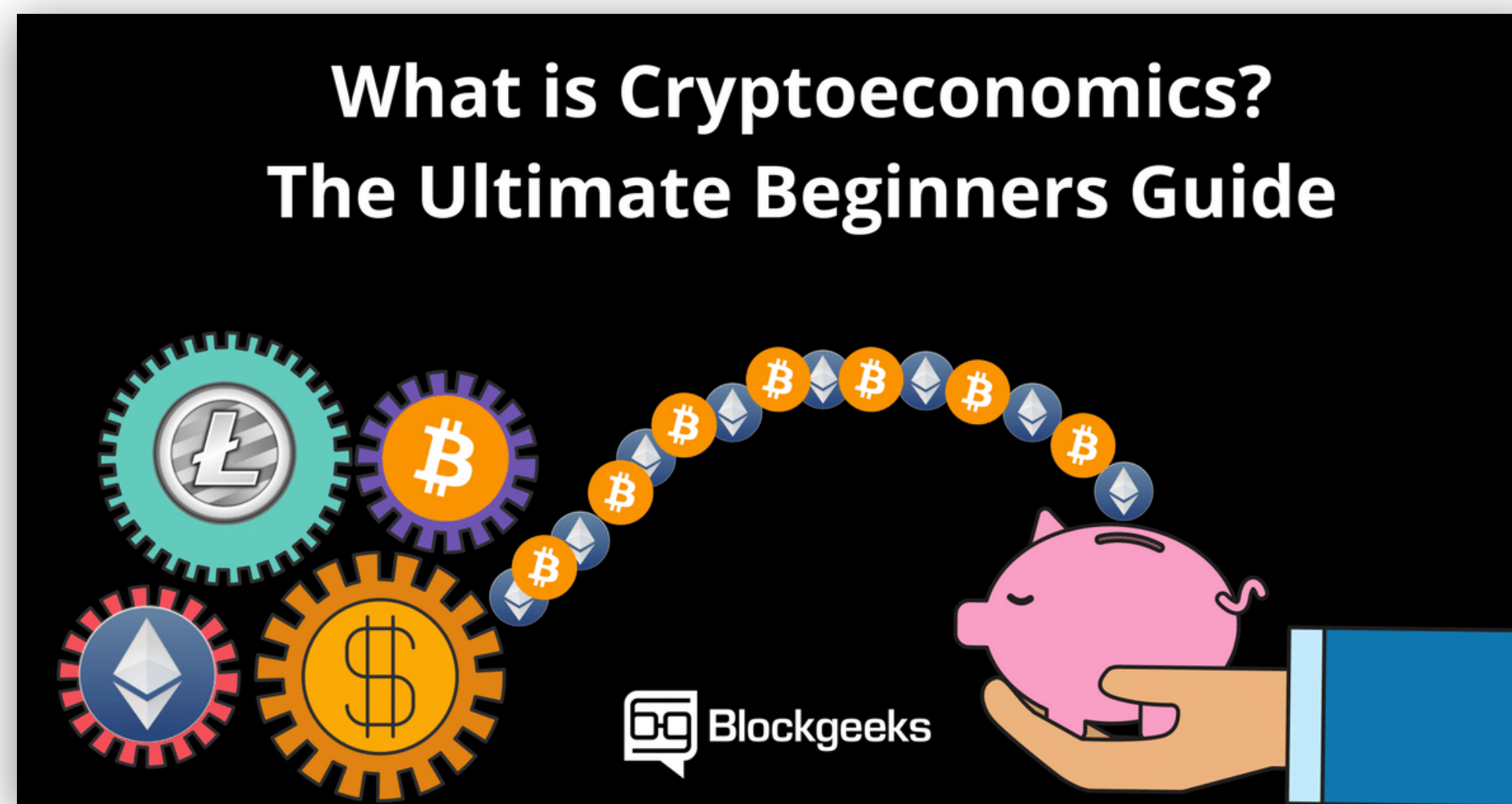
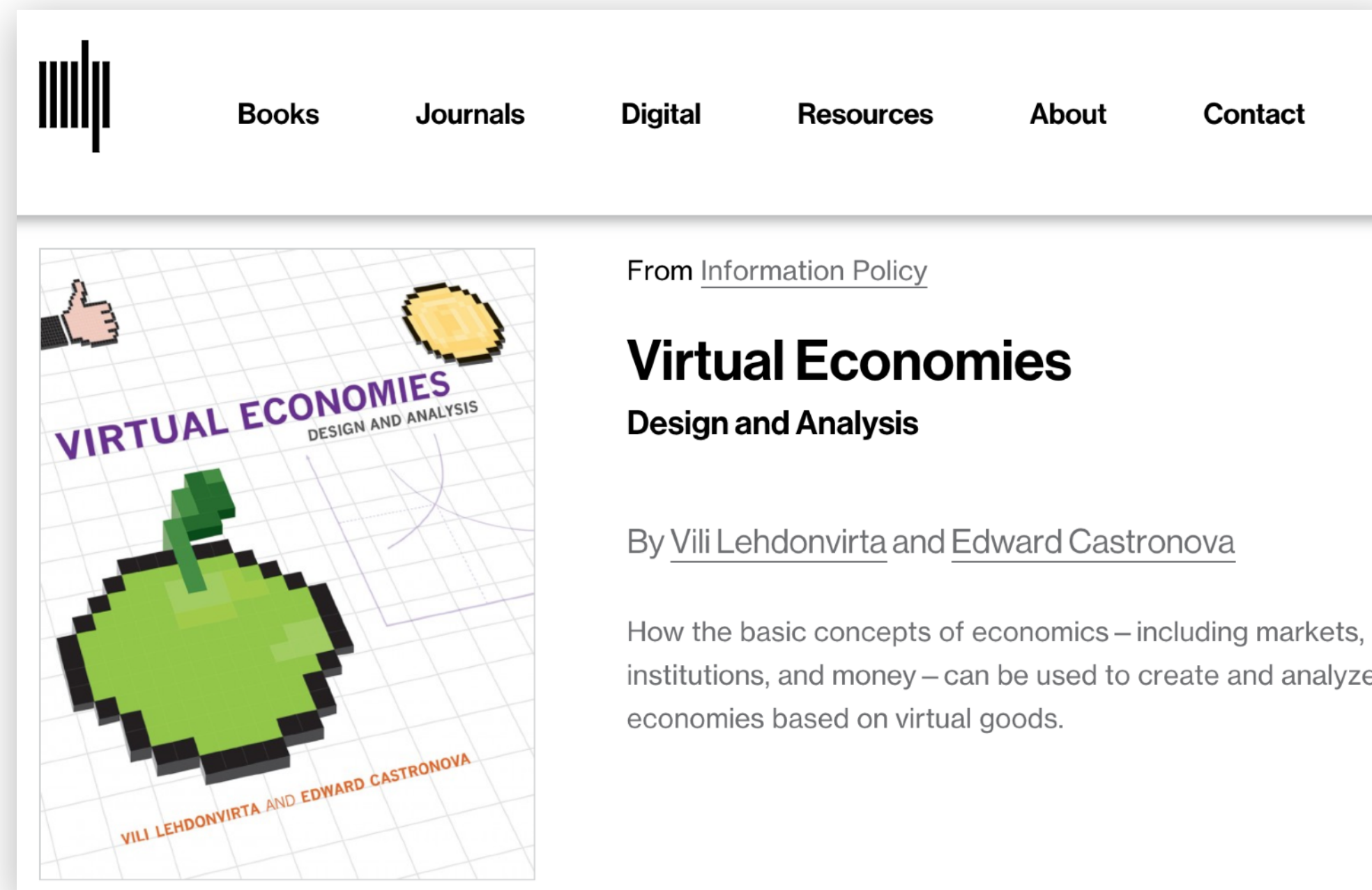
Never miss a story from **Fred Ehrsam**, when you sign up for Medium. [Learn more](#)

GET UPDATES

Blockchains make macroeconomics an experimental science

Before, people studied virtual economies in the context of video games.

Crypto takes that to the next level. Whatever your thesis on economic governance - inflationary, deflationary, demurrage - if you can get enough people to try it, you can run the experiment.



Tens of millions of people (and billions of dollars) are now invested in these experiments

Now that blockchain has turned macroeconomics into an experimental science, you can try out every philosophy under the sun - simultaneously, with part of your net worth.

Hayek vs Keynes vs heretofore-unseen hybrids. It's all happening in realtime.

NEWS

Coinbase Hits Reported \$8 Billion Valuation With Over 25 Million Users

'YES, YOU' NEED A BITCOIN HARDWARE WALLET: LEDGER REVEALS 1.3 MILLION UNITS SOLD



WILMA WOO | OCT 17, 2018 | 17:00

Survey: Nearly 80% of Americans Have Heard of Bitcoin

CRYPTOCURRENCY










Bitcoin market cap falls below \$100 billion for first time since October 2017

PUBLISHED WED, NOV 14 2018 • 9:31 PM EST | UPDATED THU, NOV 15 2018 • 4:37 PM EST

Thus, the new laboratory of the states is a laboratory of networks

If federalism meant the laboratory of the states, decentralization is creating the laboratory of the networks.

Top 100 Cryptocurrencies by Market Capitalization

<div>Cryptocurrencies ▾ Exchanges ▾ Watchlist USD ▾ Next 100 → View All</div>						
#	Name	Market Cap	Price	Volume (24h)	Circulating Supply	Change (24h)
1	 Bitcoin	\$62,927,160,307	\$3,594.84	\$5,599,093,934	17,504,850 BTC	-0.23%
2	 XRP	\$12,777,928,184	\$0.310419	\$356,805,032	41,163,466,448 XRP *	-1.51%
3	 Ethereum	\$11,983,645,782	\$114.57	\$2,770,264,967	104,594,158 ETH	-1.72%
4	 Bitcoin Cash	\$2,178,116,362	\$123.83	\$200,560,136	17,589,750 BCH	-2.67%
5	 EOS	\$2,172,933,558	\$2.40	\$777,054,576	906,245,118 EOS *	-1.71%
6	 Tether	\$2,038,597,397	\$1.01	\$3,888,261,784	2,017,251,167 USDT *	0.12%
7	 Litecoin	\$1,989,096,944	\$33.04	\$673,155,644	60,210,925 LTC	-0.85%
8	 TRON	\$1,952,111,684	\$0.029284	\$398,210,720	66,660,905,606 TRX	1.59%
9	 Stellar	\$1,845,090,329	\$0.096265	\$130,694,867	19,166,823,282 XLM *	-3.58%

History

Concepts

Applications: 2020

Applications: 2025

Three apps at \$1B revenue: exchanges, mining, issuance

These are the infrastructure parts of crypto.

BITCOIN

Cryptocurrency start-up Coinbase valued at \$8 billion despite bitcoin’s plunge

PUBLISHED TUE, OCT 30 2018•11:33 AM EDT | UPDATED TUE, OCT 30 2018•2:41 PM EDT



Kate Rooney

@KROONEY

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THE BLOCK

Bitcoin miners made an estimated \$5 billion in revenue during 2019

January 18, 2020, 11:58AM EST · 1 min read



by Mike McSweeney

Ethereum Millionaires Tell Their Stories



BIDITEX Exchange

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One app at \$100M revenue: hardware wallets

This is growing but is not yet as large as the other three sectors.

Ledger Sold 1 Million Crypto Hardware Wallets in 2017, Attracts Investors in Samsung and Google

 **Joseph Young**
CCN July 10, 2018











ledger

Leading hardware crypto wallet manufacturer and developer Ledger sold more than 1 million hardware wallets in 2017, recording a profit of \$29 million.

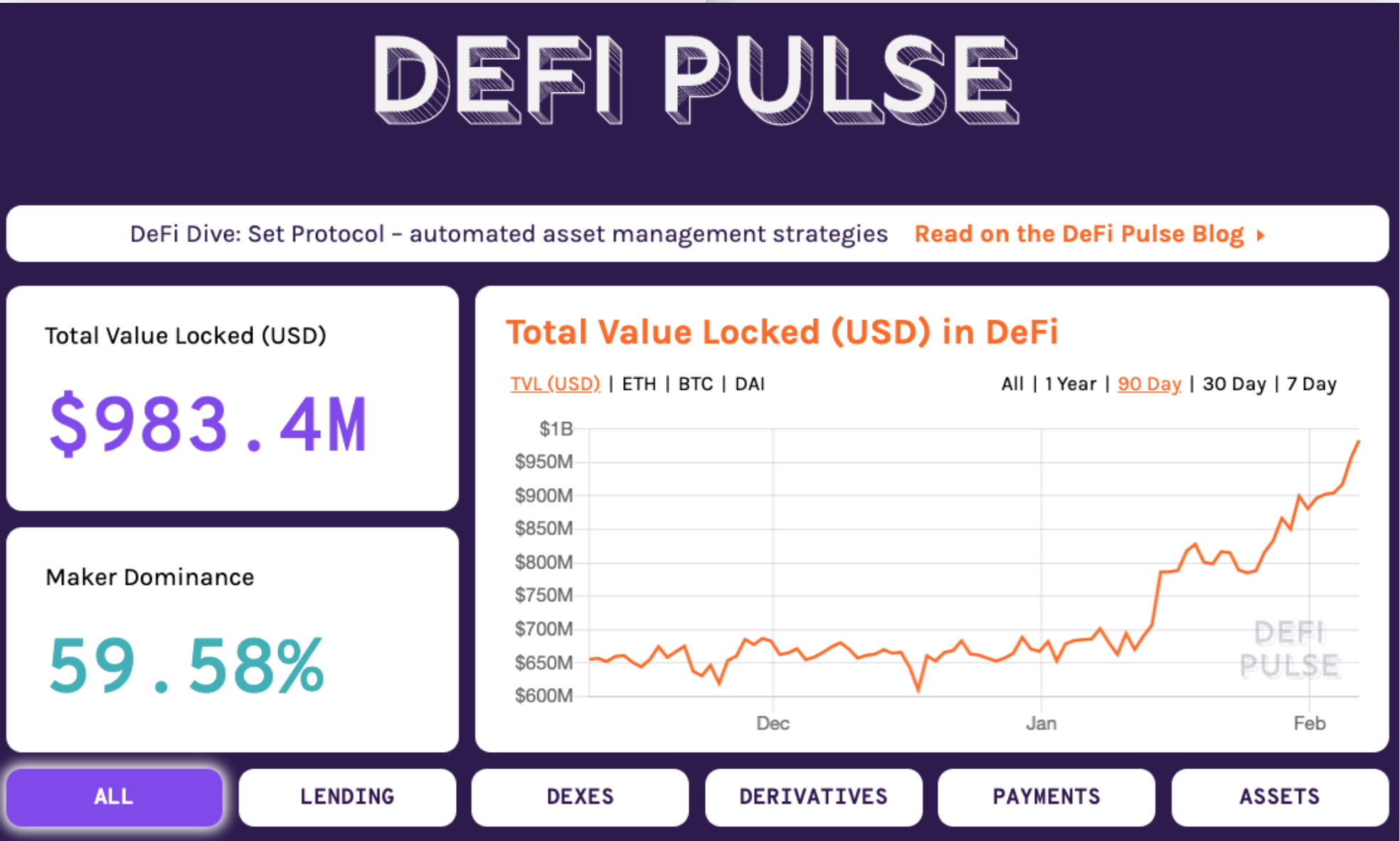
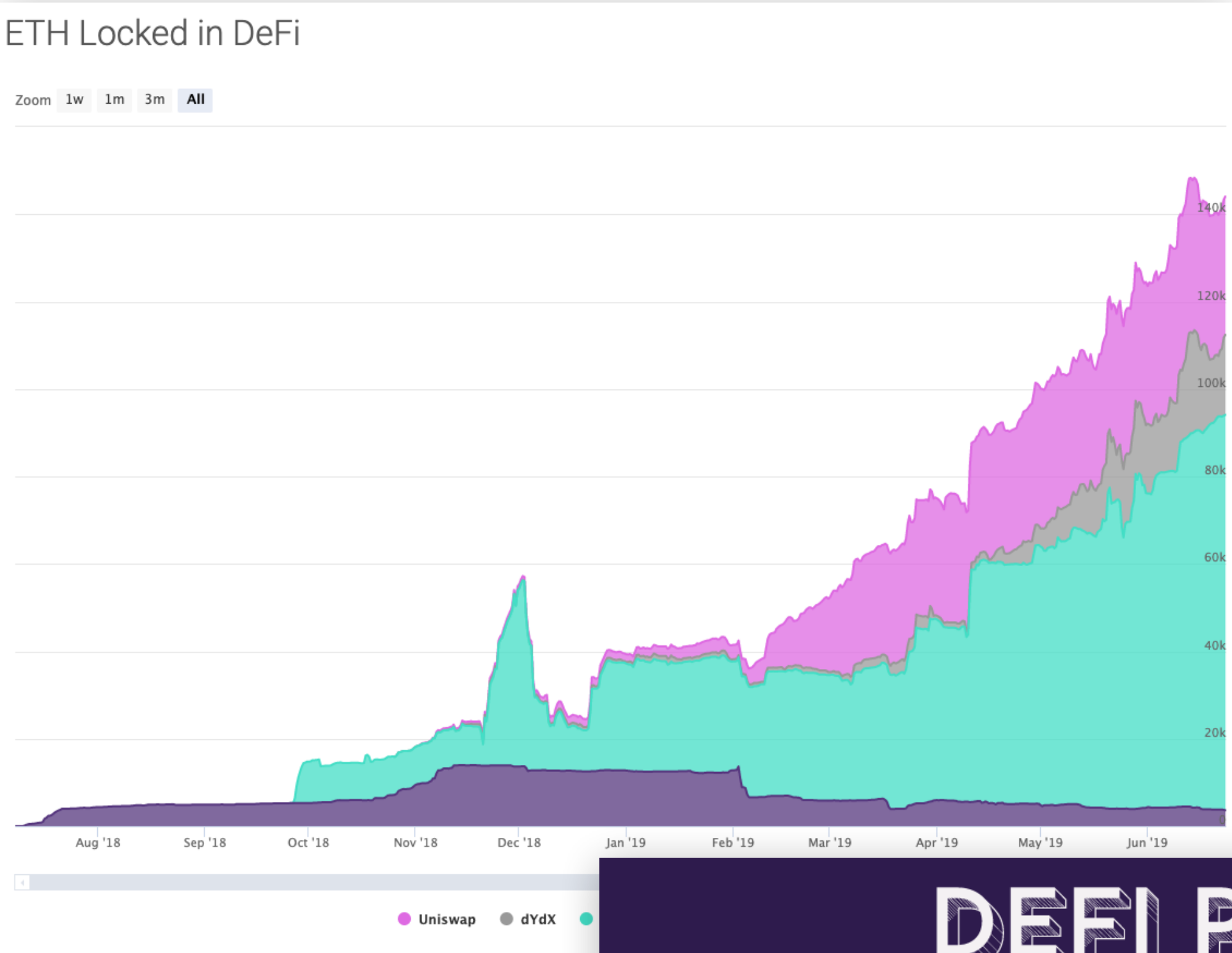
Stablecoins at \$5B+ in stored value

Mainly Tether, but USDC and DAI also worthy of note.

Stablecoin Stats v0.1.7 API Theme ▼				
Name	Circulation	▲ Change (24h)	Price	Tracked Volume (24h)
 Tether USD (USDT)	4,491,590,765.41	24,500,000.00 (0.55%)	\$0.9991 (-0.05%)	2,248,922,149.09 (21.83%)
 USD Coin (USDC)	425,911,624.60	-627,897.23 (-0.15%)	\$1.0003 (0.05%)	60,073,283.05 (6.33%)
 Paxos Standard (PAX)	226,048,198.19	6,818,059.22 (3.11%)	\$1.0001 (0.03%)	19,138,640.77 (0.89%)
 TrueUSD (TUSD)	138,867,102.96	2,519.28 (0.00%)	\$1.0003 (0.04%)	27,293,205.00 (-22.81%)
 Binance USD (BUSD)	30,278,034.13	-5,270,073.28 (-14.83%)	\$1.0006 (0.16%)	33,102,373.23 (-2.47%)
 Dai (DAI)	23,182,265.20	-286,545.18 (-1.22%)	\$0.9999 (0.11%)	4,242,453.98 (63.95%)
 Gemini Dollar (GUSD)	5,138,109.94	385,155.88 (8.10%)	\$0.9966 (0.22%)	1,496.76 (-84.81%)
 StableUSD (USDS)	664,923.59	-1,500.00 (-0.23%)	\$0.9968 (-0.21%)	98,013.06 (10.59%)

DeFi now at almost \$1B in stored assets

Maker, Synthetix, and Compound are leaders, but many more apps.



History

Concepts


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Decentralized Cold Storage (Casa)

Casa is gaining traction here.
Paradoxical but similar to Coinbase:
a centralized service facilitates
custody of a decentralized asset.


Never worry about your Bitcoin.



MULTISIG SECURITY

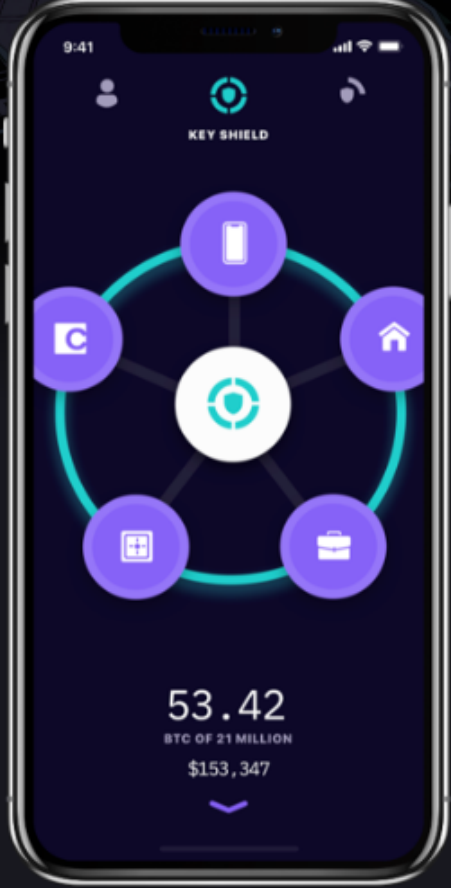


24/7 SUPPORT



SINCE 2018

[Get Started](#)



**Multisig security.
Made livable.**

Privacy Coins and Privacy Features

Also becoming more standard in more chains over time. Others also (Dash, Enigma, Beanstalk).

Privacy Coins: How Monero, Dash, and ZCash Will Enable True Privacy

Monero, Dash, and Zcash — A Primer on the Largest Privacy Coins on the Market



Tiffany Madison [Follow](#)
Mar 28, 2019 · 7 min read



Privacy

Summary

Privacy on Ethereum is being actively worked on by a number of different teams.

There are a couple of key technologies to know about:

Zero Knowledge-based

- zk-SNARKs (used in Zcash)
- zk-STARKs

[Aztec Protocol](#) is building an efficient zero-knowledge privacy protocol and decentralised exchange. The protocol is already live on Ethereum's mainnet.

[Starkware Industries](#) is using STARK technology to improve scalability and privacy on Ethereum.

[Enigma Protocol](#) are building 'secret contracts' which enable [computation over encrypted data](#).

[Zether](#) is a confidential (transaction amounts are hidden) and anonymous (transaction sender and receiver are hidden) payment mechanism on blockchains with the account model like Ethereum. [More info on Zether](#).



Bitcoin 24h **\$9,748.79** +0.46% Ethereum 24h **\$213.44** +4.20% XRP 24h **\$0.52** +0.15%

Story from **Tech** →

Bitcoin's Privacy and Scaling Tech Upgrade 'Taproot' Just Took a Big Step Forward

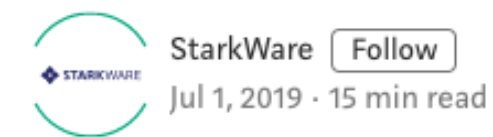
Jan 24, 2020 at 00:45 UTC Updated Jan 24, 2020 at 15:38 UTC

SaaS-for-gas (Starkware and others)

Smart contracts that are on-chain and charge for each API call. Defensibility through trust of author, network effects/switching costs, and backlinks.

StarkDEX Deep Dive: Contracts & Statement

Part 2 of 4

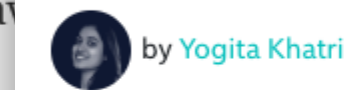


This is the second part of our StarkDEX deep dive, explaining the components of the [StarkDEX Alpha](#). In [the first part](#) we gave an overview of the system and discussed user flows and batching — if you haven't read it, we encourage you to do so before reading this post.

ETHEREUM

Ethereum's scalability has potential to improve 2,000x due to Istanbul update, says StarkWare

January 7, 2020, 4:50AM EST · 1 min read



StarkWare, a project that is working to help blockchains scale, has said that Ethereum has massive potential to scale due to its recent Istanbul network update.

According to StarkWare's "[measurements](#) (not approximations, nor estimates)," Ethereum's scalability has the potential to improve by 2,000 times over Ethereum Layer-1 after the Istanbul update.

Post-Istanbul Ethereum can handle 9,000 trades at 75 gas/trade as compared to 2,000 trades at 300 gas/trade, said StarkWare, adding that Istanbul has "certainly helped."

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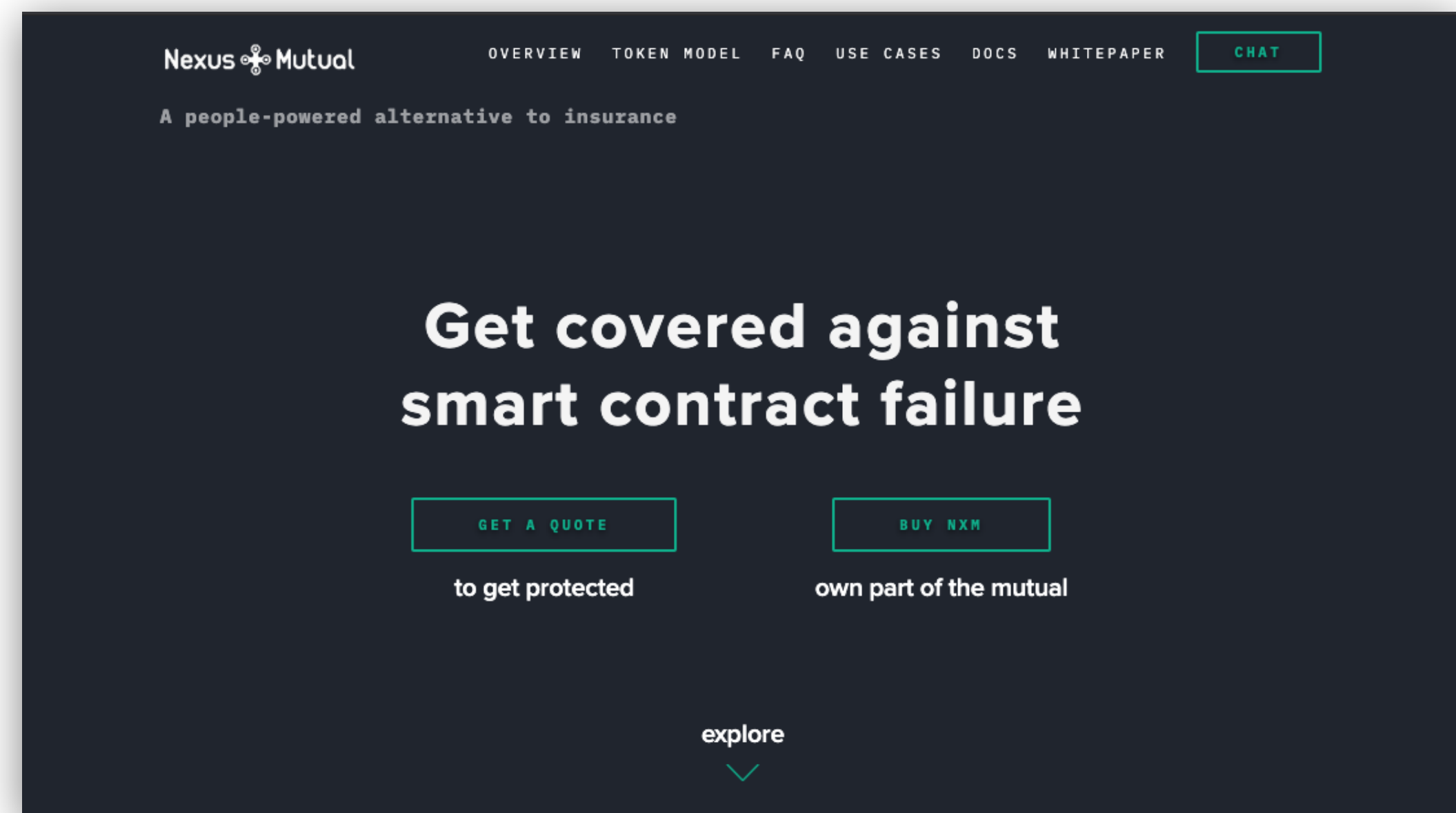
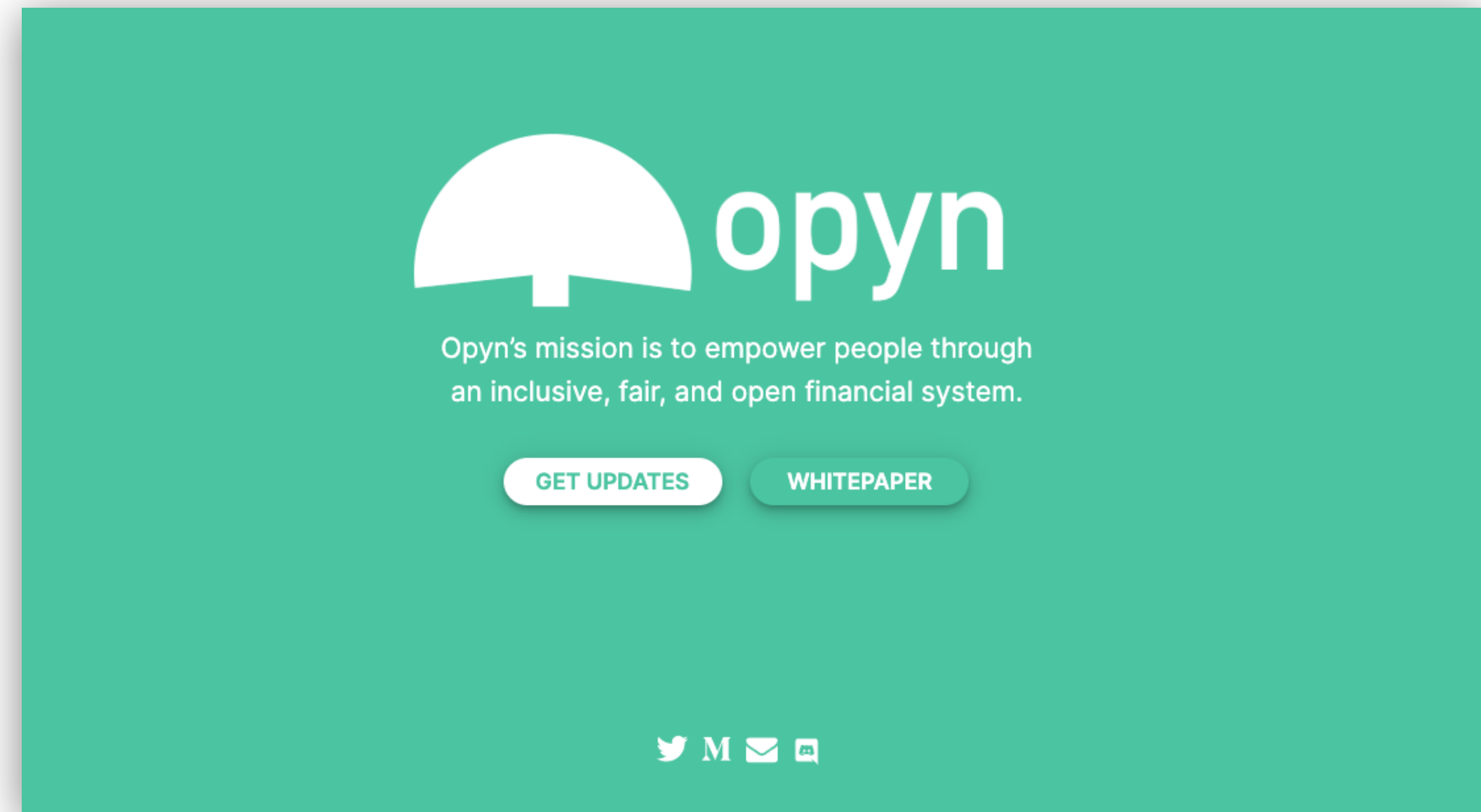
billed annually

Lending and Interest (Compound, Maker)

Many different business models here for decentralized lending (has API, works across borders, works 24/7, no limits, etc).

Insurance (Oryn, Nexus Mutual)

Allows parties to (in theory) insure
against defi contract and default risk.
Though the insurer themselves has risk.



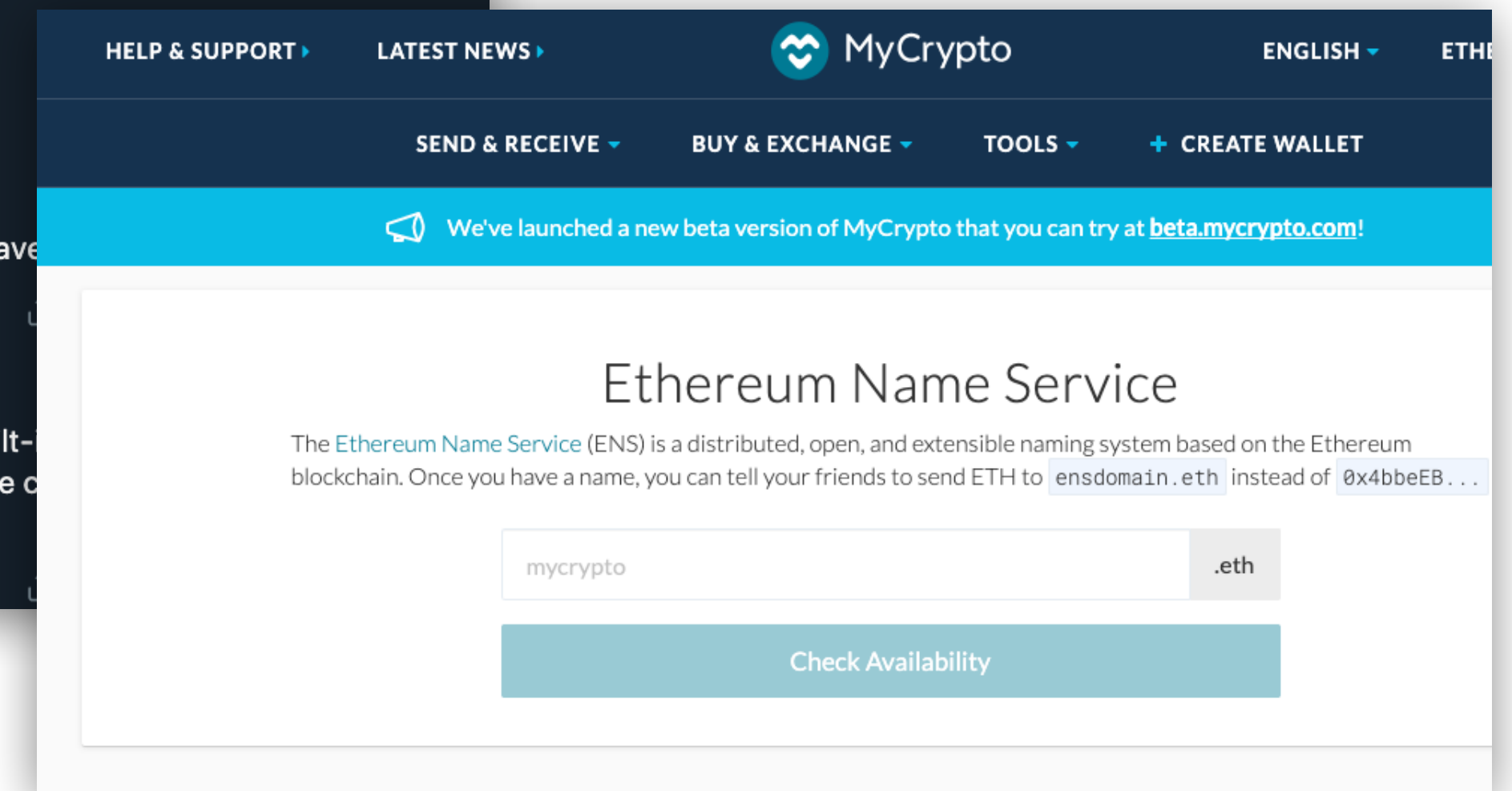
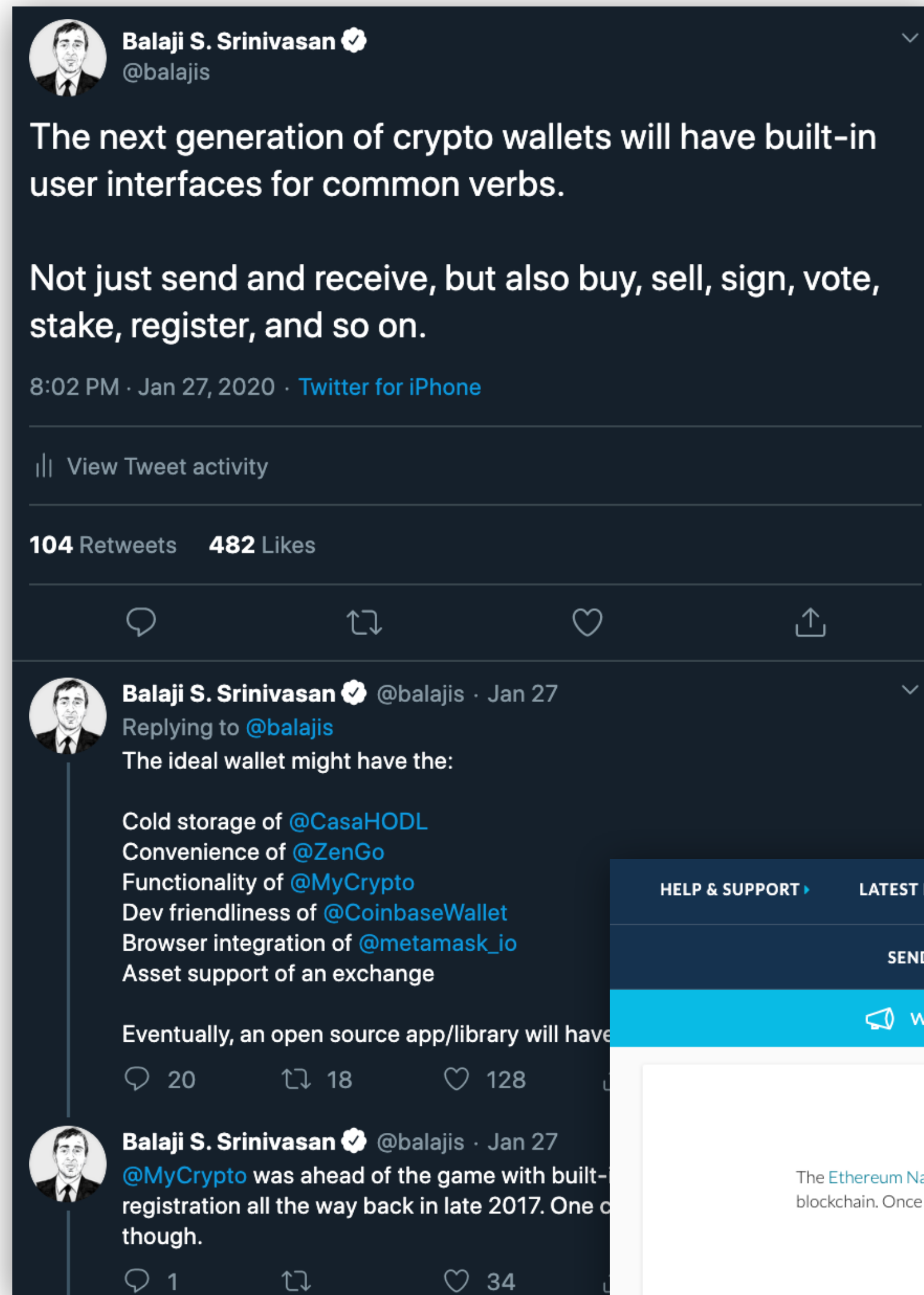
Scaling (Starkware, many others)

A number of these technologies are coming online and will likely be deployed by 2025. Many stack on top of each other.




Multiwallets with many verbs (MyCrypto)

Beyond just send/receive, we will see all the common verbs come to wallets



Security innovation (ZenGo)

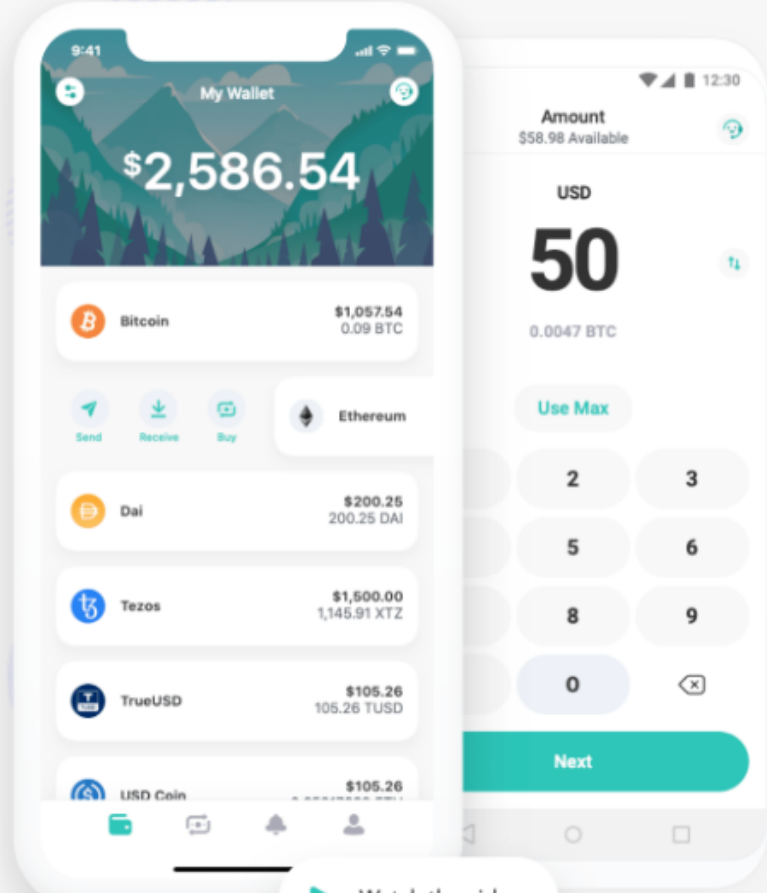
Highly innovative wallet that uses
FaceID and similar techniques for
convenient save/restore


[Buy Crypto](#)[Market Prices](#)[Security](#)[Blog](#)[Research](#)[Help](#)[Contact](#)

Meet the first keyless crypto wallet

Say goodbye to worries and hello to peace of mind

[Download on the App Store](#)[GET IT ON Google Play](#)

[Watch the video](#)



What is keyless?

With our breakthrough cryptography, there's no private key to worry about. Instead, your security is distributed between your device and ZenGo servers. So even if we get hacked or you lose your wallet, your assets are always safe. You get maximum security with complete control. [Learn More](#)

Novel financial instruments (Fomo3D, PoolTogether)

In the spirit of crypto: incentivize good behavior with the spirit of a lottery.

futuretense

The Cryptocurrency Game With a \$9 Million Prize

Is Fomo3D an incisive critique, a scam, or a little of both?

By ARVIND DILAWAR

AUG 06, 2018 • 2:41 PM

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COMMENT




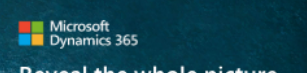
Photo illustration by Slate. Photos by Thinkstock.

Future Tense is a partnership of Slate, New America, and Arizona State University that examines emerging technologies, public policy, and society.


futuretense

On its face, **Fomo3D** is a straightforward game of chance: Players have 24 hours to buy in to a pot, the lion's share of which goes to the last buyer to get in under the buzzer. Every time a player buys in, 30 seconds is added to the clock, which caps at 24 hours. The pot becomes more expensive. Players can buy in as many times as they want. At the end of the 24 hours, the last person to buy in wins the pot. If no one buys in, the pot is reset. The very first round of Fomo3D began July 8 with no money in the pot. As of August 6, there are two hours left on the clock. Buy-in has risen from less than \$1 million to more than \$4 million buy-ins, the pot is worth almost \$9 million. How does it work?

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Reveal the whole picture



You could win **\$1,644** every week just by saving your money

JOIN THE POOL

1. Join the Pool

Deposit Dai into the pool to get tickets. Each ticket is a chance to win weekly prizes! For every 1 Dai you deposit you get 1 ticket. [Read this to learn more about Dai](#)

2. Interest builds

All the Dai in the pool earns interest. The prizes are funded solely by the interest earned.

3. Prizes awarded

At the end of the week one lucky person wins all of the interest that accrues!

4. Never lose!

Whether you win or not you get all of your money back! You can withdraw your savings and winnings at any time.

Ready to give it a shot?

JOIN THE POOL

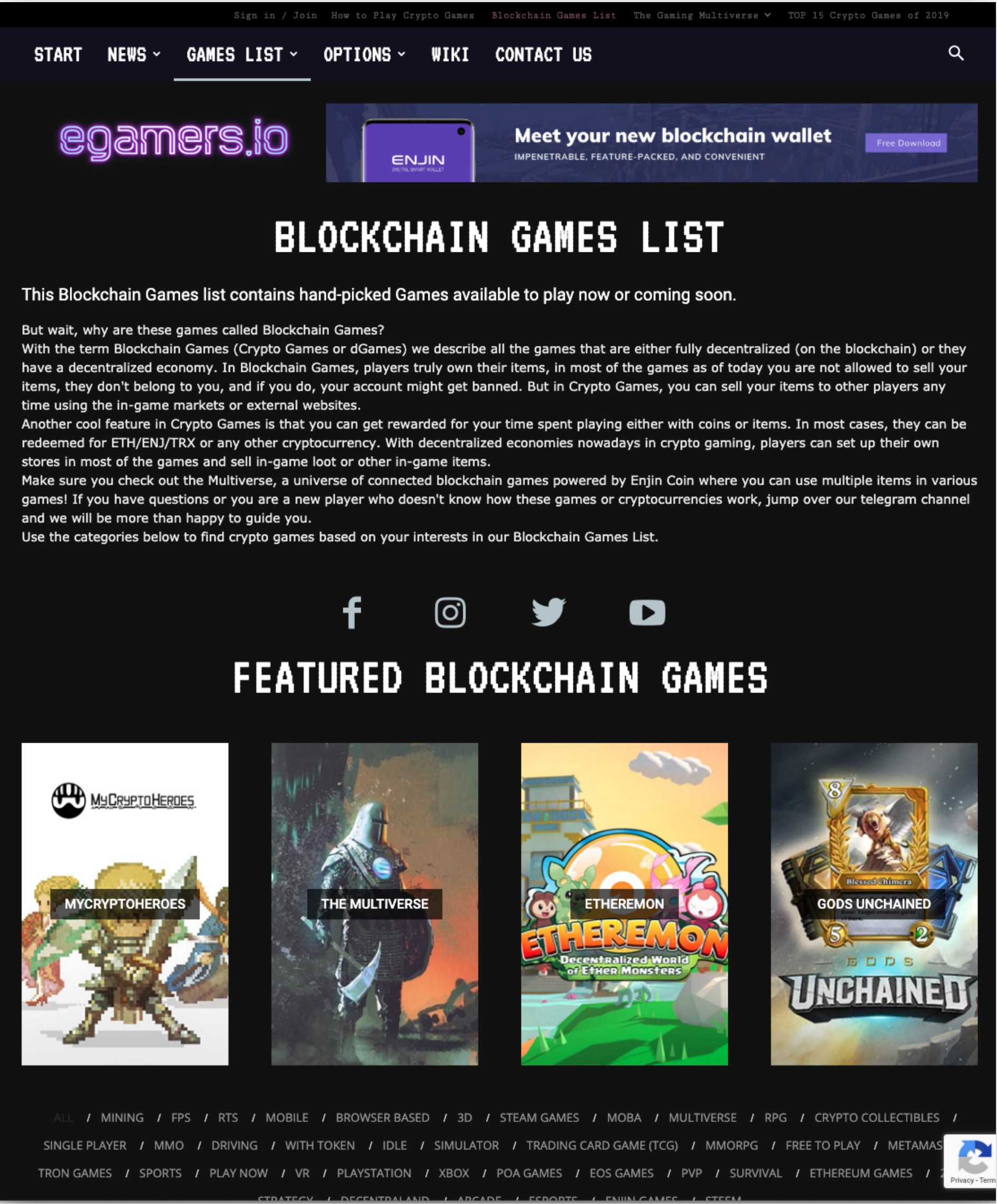
Need more info?

READ THE FAQ

DROP US A LINE

Blockchain games (egamers, Forte, EOS)

Video games with micropayments
built-in. Merges esports and crypto.
Josh of Forte will talk more about this.



Crypto social networks (Voice, Twitch)

Could list many more. These are still in their infancy. Many levels of decentralization. Some just use a decentralized currency and centralize everything else.

voice

Get to Know VoiceFAQBlogCompanyRequest Beta

Social as it should be.

We think social networking needs a rework. From bot mobs to data tracking and shady algorithms, social media isn't our friend. Cue Voice.

Request beta

Read blog

voice

TechnologyTrending


Alba Bethania

3525k

"The greatest glory in living lies not in never falling, but in rising every time we fall." -Nelson Mandela

Noma Tadesse

719k




Best Places to Vacation in Bali

Bali is part of the Coral Triangle, the area with the highest biodiversity of marine species.[9] In this area alone, over 500...

Watch the keynote

Block.one CEO Brendan Blumer talks Voice and the future of social media.



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I accept

TwitchLog In

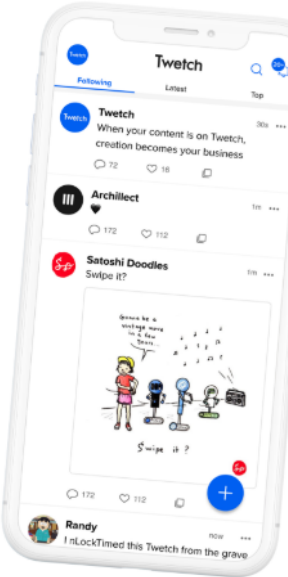
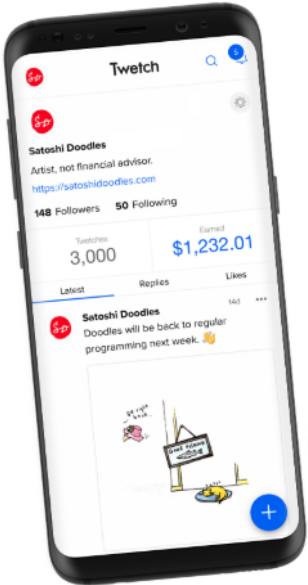
Take back your data.

Sign up now for the only social media that lets you own your data and profit from your content.

Join our private beta.

Your best email...


Sign Up



What our users say


“

Twitch content/community is so good. I love this. You can instantly notice the quality of conversation difference from any other social platform. This is honestly the most I've been excited about crypto in a while, thank you guys.

@michaelhippos

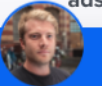
“

I'm almost breaking \$100 in revenue on Twitch.

@vegardwikeby

“

Twitch is the first social media that allows me to take full control of the information I consume (no ads) and be sure that there is no

Anthony from Twitch

Hi there 🙌 How can I help you today?

Type your message...@AshallTurn

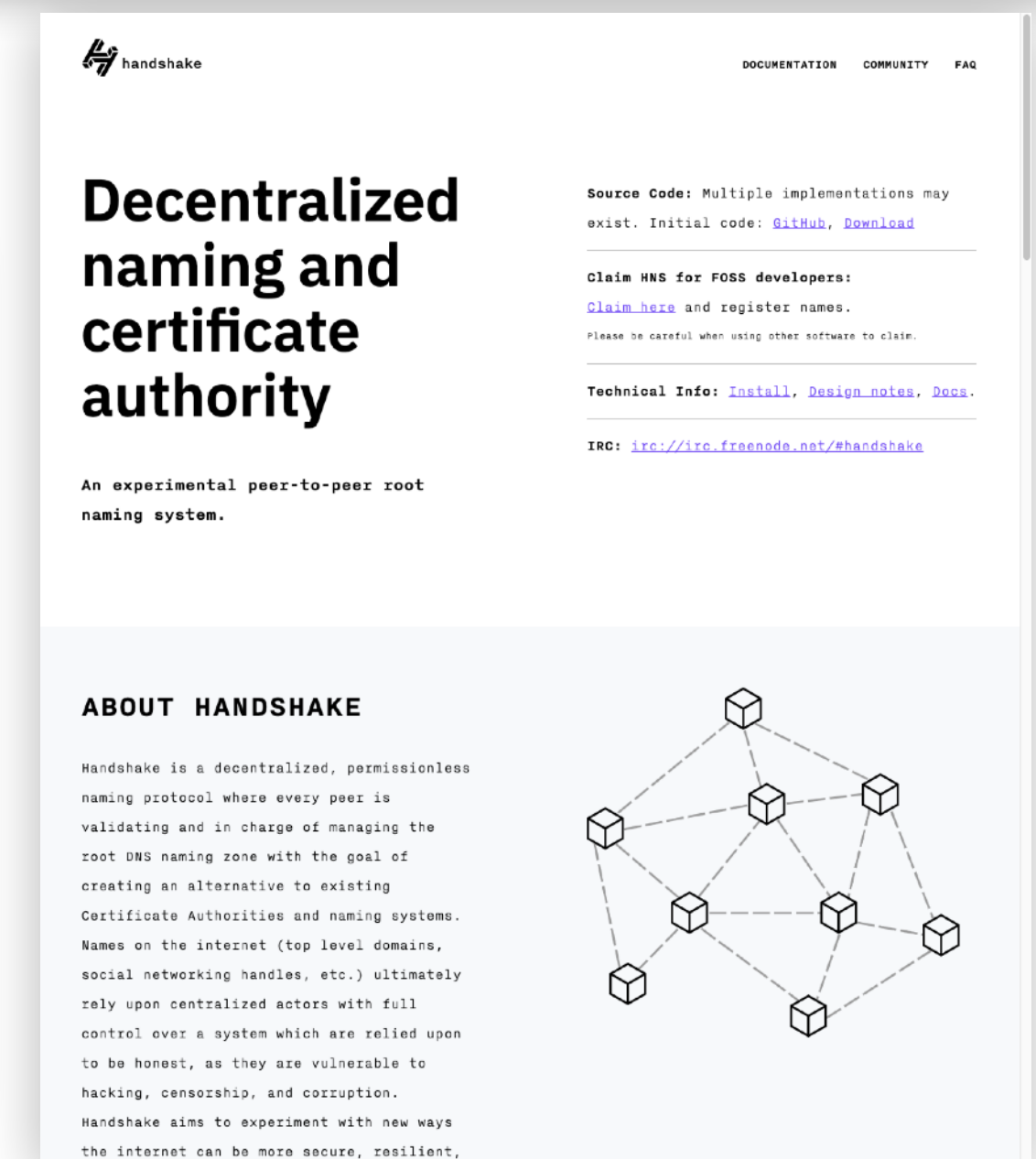
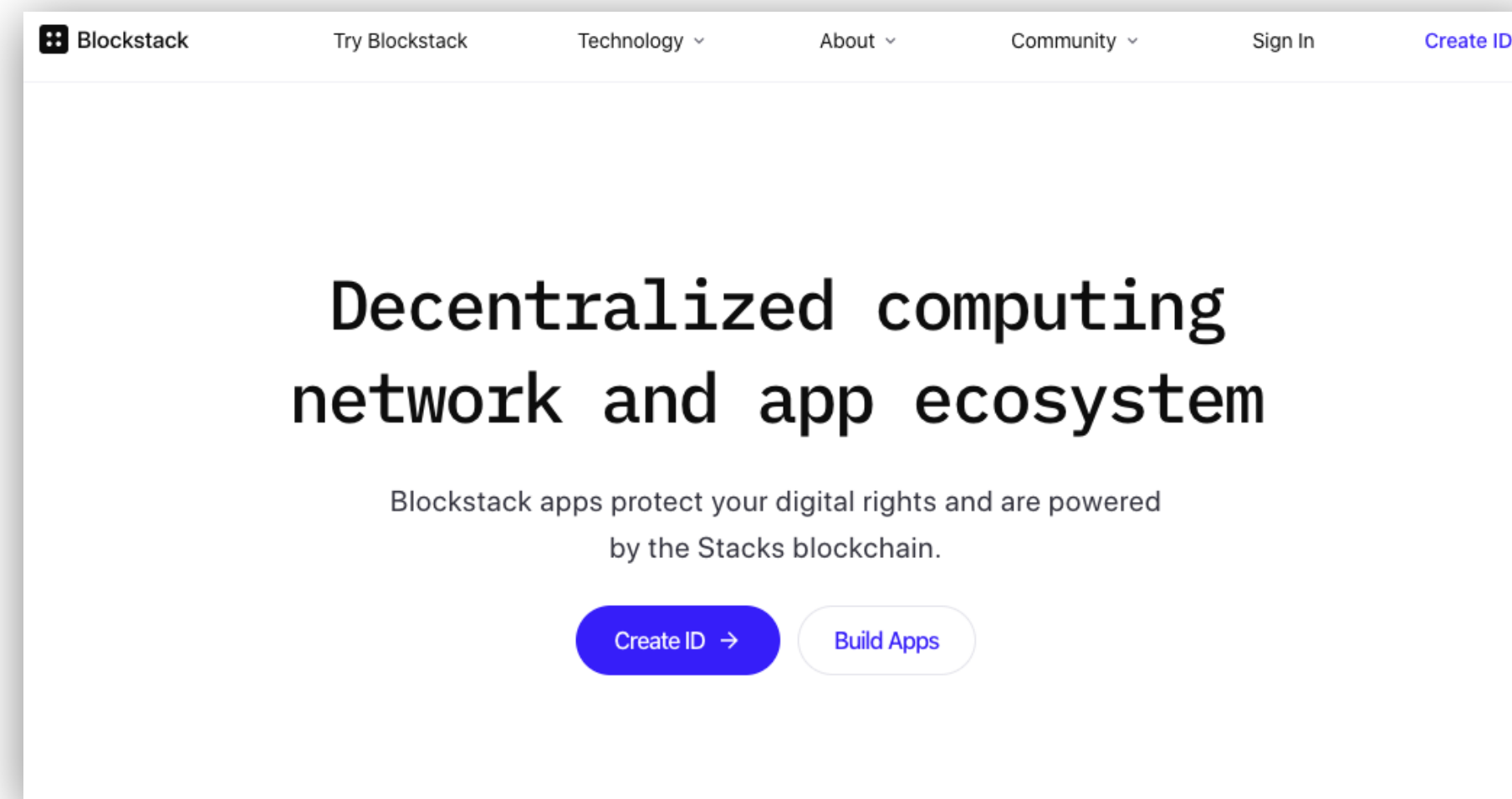
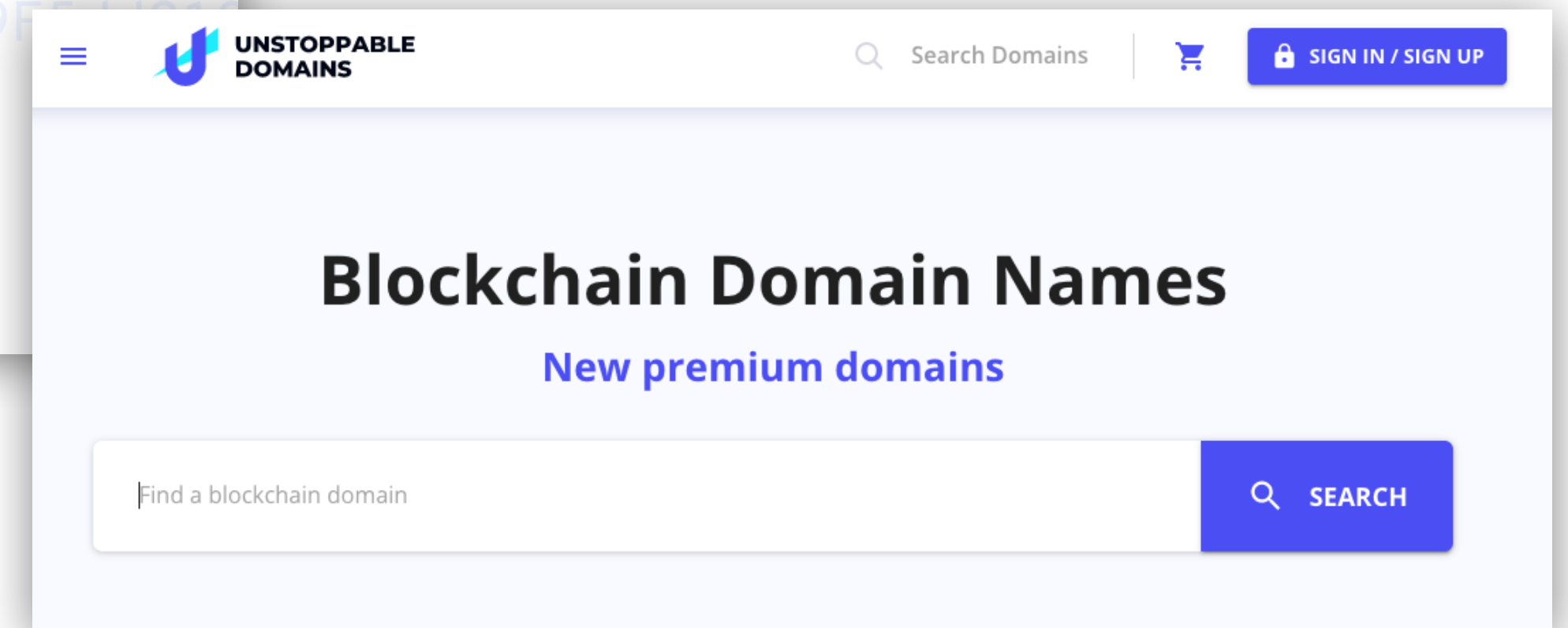
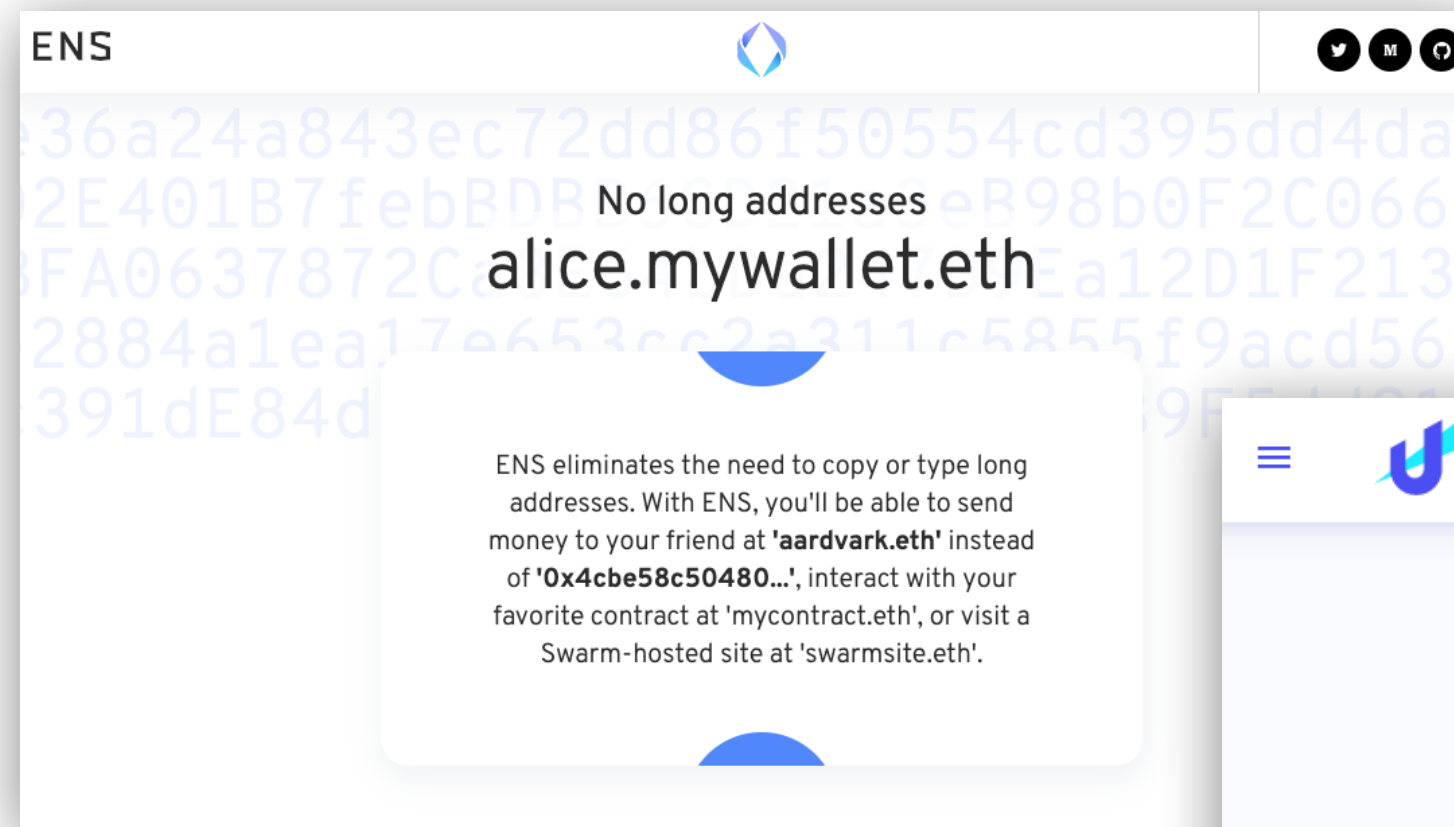
Chat ⚡ by Drift

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Decentralized DNS (ENS, Unstoppable, Blockstack, Handshake)

Fully programmable and liquid DNS
without the central registry. Get a
domain like setting up a virtual
machine.



Automated Market Making (Uniswap, Kyber Bonding Curves)

Liquidity for the long tail. This is questionable as to whether it will work given presence of other markets, but people are trying.



Uniswap is a protocol for automated token exchange on Ethereum.

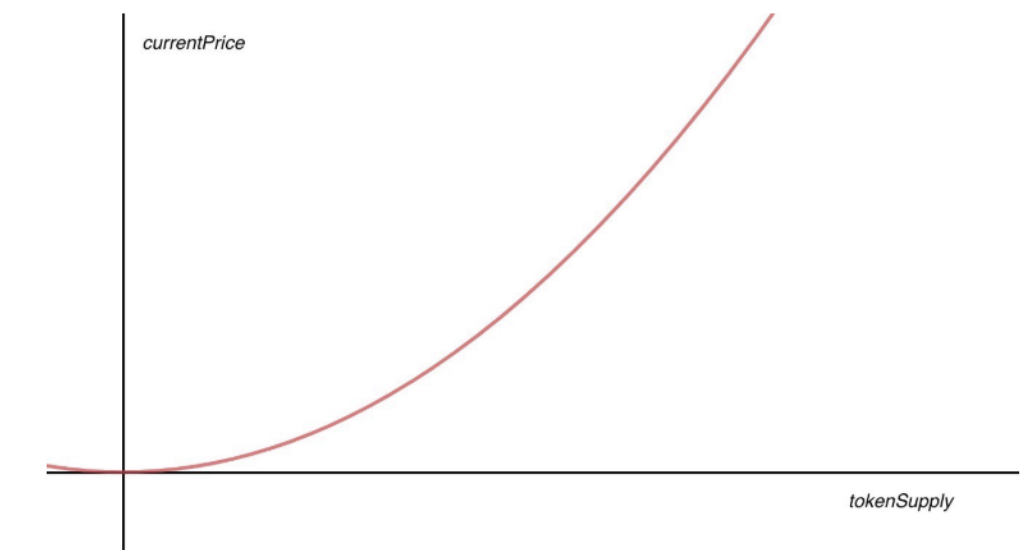
- A **simple smart contract** interface for swapping ERC20 tokens
- A **formalized model** for pooling liquidity reserves
- An **open source frontend** interface for traders and liquidity providers
- A commitment to free and decentralized asset exchange

Swap Tokens

Read the Docs

Bonding Curves

A **bonding curve** is a mathematical curve that defines a relationship between price and token supply. Here's an example of a bonding curve, where `currentPrice = tokenSupply2`:



This bonding curve says that price increases as the supply of the token increases. In the case of an exponential curve such as the one above, the growth rate accelerates as the number of tokens minted increases.

When a person has purchased the token, each subsequent buyer will have to pay a slightly higher price for each token, generating a potential profit for the earliest investors. As more people find out about the project and buying continues, the value of each token gradually increases along the bonding curve. Early investors who find promising projects early, buy the curve-bonded token, and then sell their token back can earn a profit in the future.

💡 You can have [different curve shapes](#) to accomplish different goals and properties.

Mathematical Formula

Decentralized Identity (3Box)

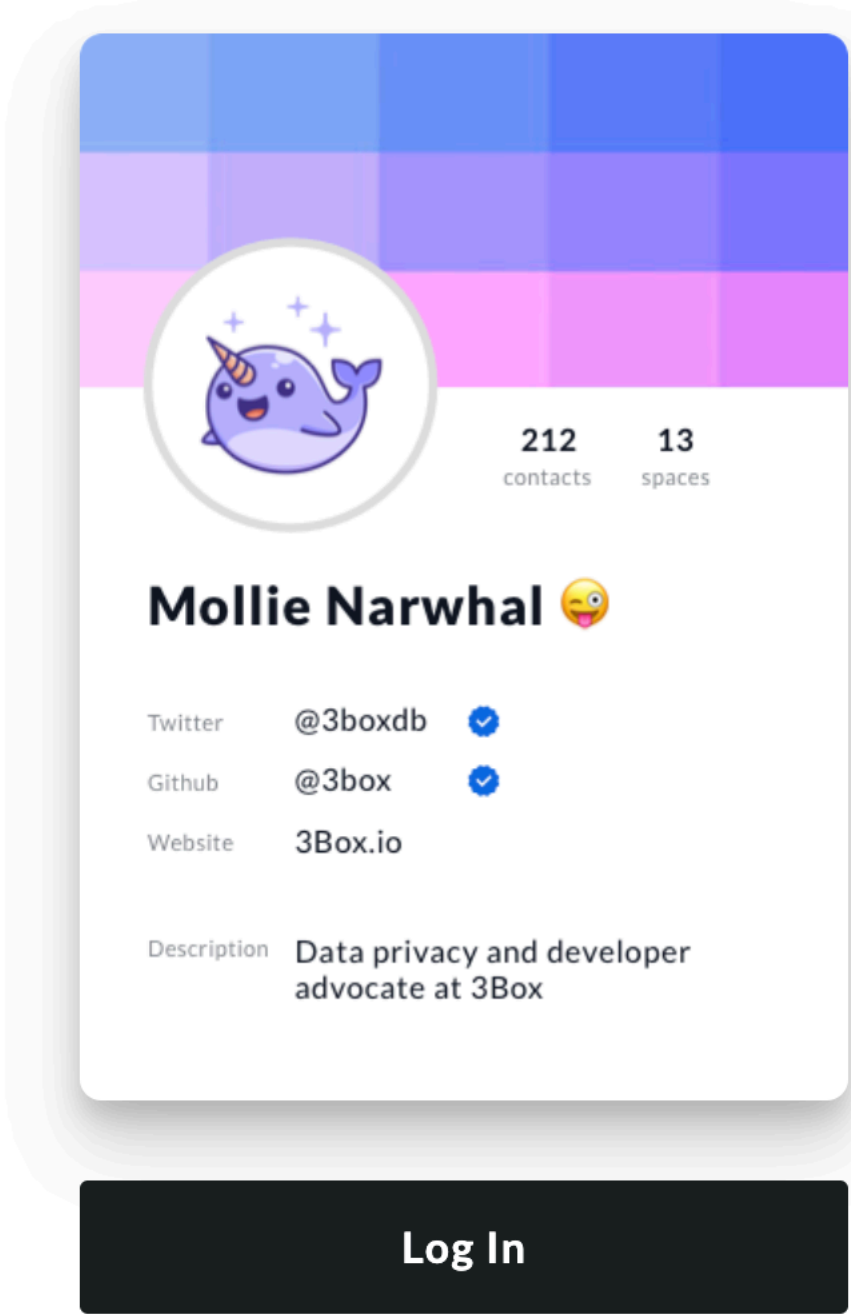
Many efforts here too. May require bootstrapping by a centralized agency.

3BOX HUB

Your new home online.

Experience the internet like never before with your new all-in-one sign-in, profile, and cloud storage.

-  **Ethereum Single Sign On**
-  **Identity and Reputation**
-  **Personal Cloud Storage**



Choose wallet

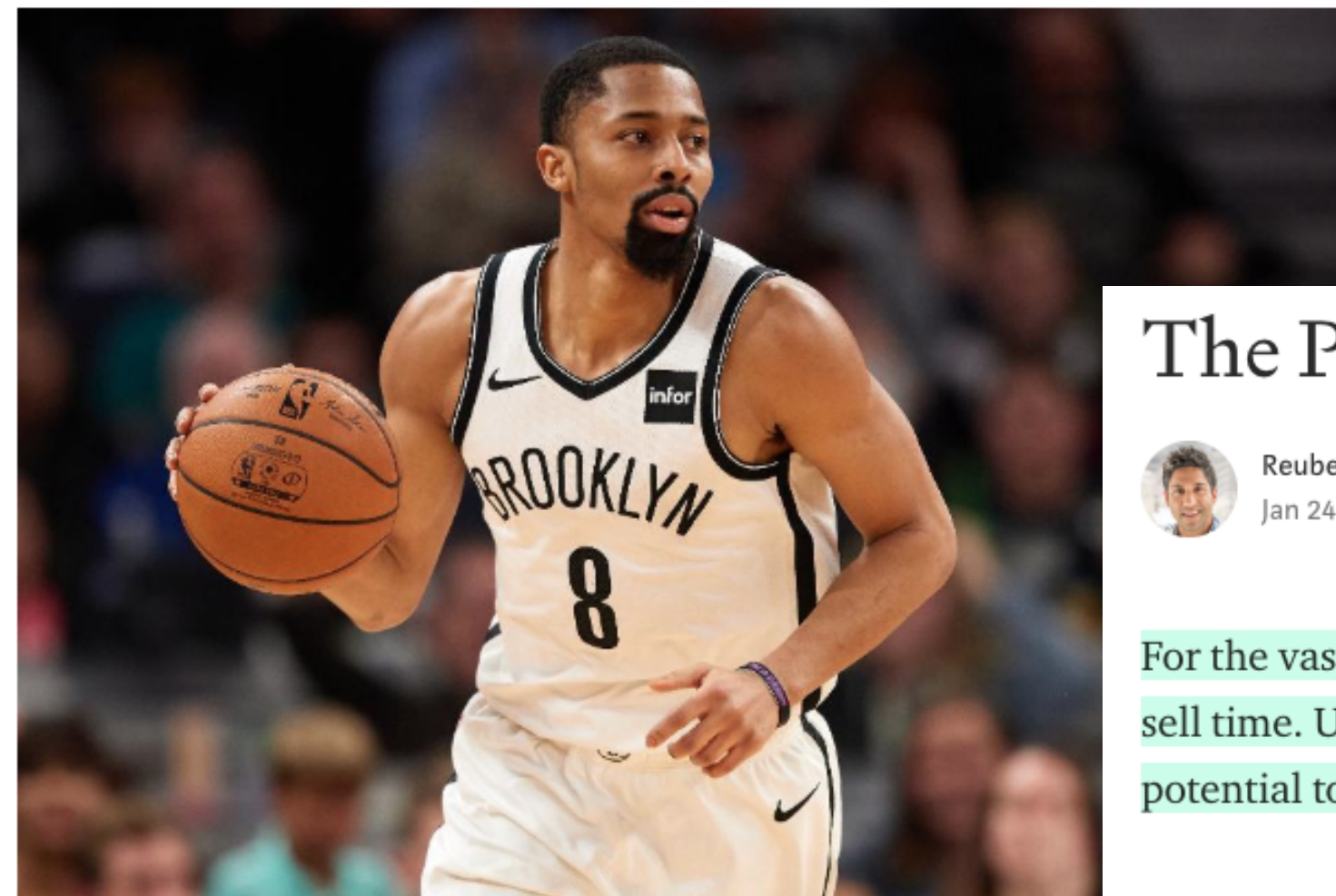
Personal Tokenization (CNSL, Dinwiddie)

Issue an equity-like token for your time or some function of your time (like a consult).

Spencer Dinwiddie Launching Digital Token Next Week, Discusses NBA's Threat To Terminate His Contract



Shlomo Sprung Senior Contributor @
[SportsMoney](#)
I write informative sports columns, features and analysis pieces.



Spencer Dinwiddie's SD8 digital tokenization plan will launch next week as he makes his return to the NBA. [\[+\] GETTY IMAGES](#)

The Personal Token Revolution



Reuben Bramanathan [Follow](#)
Jan 24 · 4 min read



For the vast majority of people, the only reliable way to make money is to sell time. Usually, this involves employment, but the cryptoeconomy has the potential to revolutionize the ways we convert our time into money.

Bounties, grants and personal tokens, together with the rise of remote work, are starting to break down the boundaries of traditional work. Personal tokens will enable internet-native individual business: the free flow of value **for** your services and value **of** your services.

Issuing a personal token that is redeemable for your services can be effective if your work involves creating anything digital: code, content, design, or advice. If you produce a product, you can tokenize the product instead of your time, like [Unisocks](#).

Mutuals and Guilds (Moloch, Gitcoin)

Attempts to incentivize collective action. Gitcoin allows people to vote with their funds for the direction of protocol development.

Moloch DAO explained: Using self-interest to Ethereum’s advantage

May 30, 2019

What is Moloch DAO?

What the heck is all this talk is about Moloch DAO? Well for starters, this is a moloch:



This Thorny Devil is the *Moloch horridus*

Okay, that’s not the Moloch you seek. Jokes aside, **Moloch DAO** (DAO stands for “decentralized autonomous organization”) is a new Ethereum community funding initiative. It’s part charity and part playfully terrifying meme (Moloch is an ancient god of child sacrifice).

A contribution to Moloch DAO isn’t an investment in the traditional sense. Instead of seeking a direct financial benefit, members share in the collective benefit from improvements to public goods funded by the DAO. Moloch will initially focus on funding Ethereum 2.0 development.

Sustain Web3 Virtual Hackathon runs January 29th to February 12nd - [Check out the details](#)



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Founder’s Rewards (Zcash, BCH)

New business model for funding
developers from rewards.

OUR TAKE **MACRO ANALYSIS**

An analysis of Zcash's founders reward

August 7, 2019, 4:15PM EST · 4 min read



BY **JOHN DANTONI**

NEWS

Major Bitcoin Cash (BCH) Mining Group Proposes Block Rewards Dev Fund

A mining group in the Bitcoin Cash ecosystem has proposed an "Infrastructure Funding Plan" that would slot 12.5 percent of BCH block rewards over a six-month period

BY **WILLIAM M. PEASTER** - JANUARY 23, 2020

On-Chain Developer Bounties (Tezos)

On-chain governance for funding developers via bounties.

coindesk

NEWS

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RESEARCH

EVENTS

Bitcoin 24h

\$9,884.21 -2.64%

Ethereum 24h

\$224.16 -1.95%

XRP 24h

\$0.274544 -3.01%

Bitcoin Cash 24h

\$453.64 +0.93%

Bitcoin SV 24h

\$353.73 +1.64%

Story from Tech

Tezos Is About to Enact Its First-Ever On-Chain Blockchain Update

May 28, 2019 at 18:41 UTC • Updated May 28, 2019 at 19:57 UTC

f

in

Christine Kim

in

After nearly three months of voting by token holders, the Tezos blockchain will undertake a series of backwards-incompatible changes to the network on Wednesday.

Called Athens A, the upgrade proposal was the first to undergo the network’s “self-amendment” process in which bakers on Tezos – equivalent to miners on bitcoin or ethereum – stake tokens bundled into “rolls” to show their support for or against competing upgrade proposals. Tezos is a proof-of-stake (PoS) blockchain with an estimated valuation of over \$1 billion.

Teeing up this week’s event, a developer group known as Nomadic Labs kick-started Tezos’ first on-chain governance process back in February. At the time, the news was a notable given the [turbulence](#) that took place during the project’s early days.

As [reported](#) in March, Nomadic Labs put forward two proposals: Athens A and Athens B. Athens A and Athens B both suggested an increase to the computation or gas limit of Tezos blocks. This would effectively make smart contract deployment easier for application developers building atop the platform.

Athens A, on the other hand, also suggested a reduction to the minimum amount of tokens – called a roll size – that’s required for a user to become a baker. This would reduce the barrier to entry for baking and encourage a higher number of bakers on the Tezos blockchain.

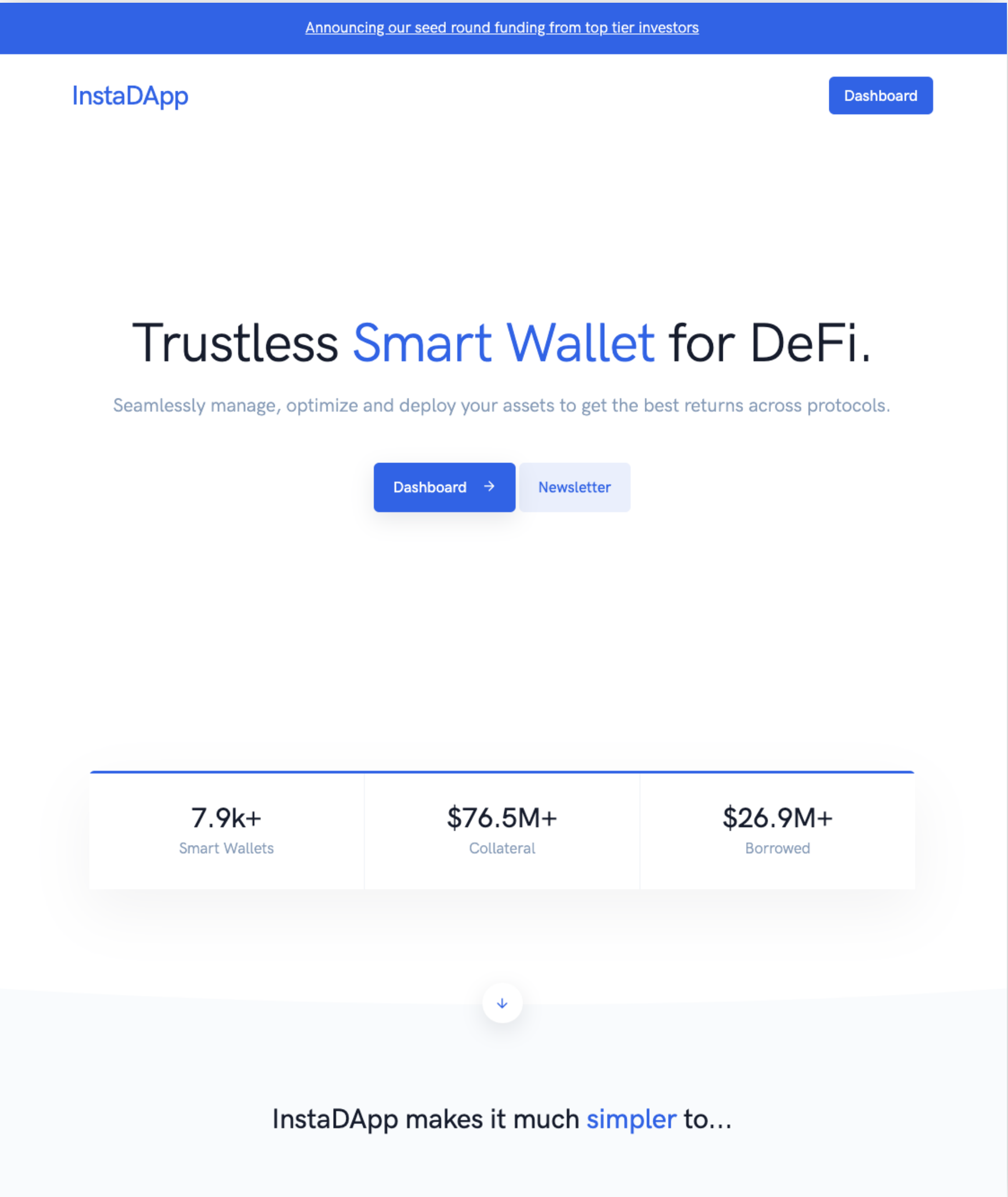
After three months of voting and testing, bakers have now officially passed the final voting threshold to activate Athens A on Tezos’ main network.

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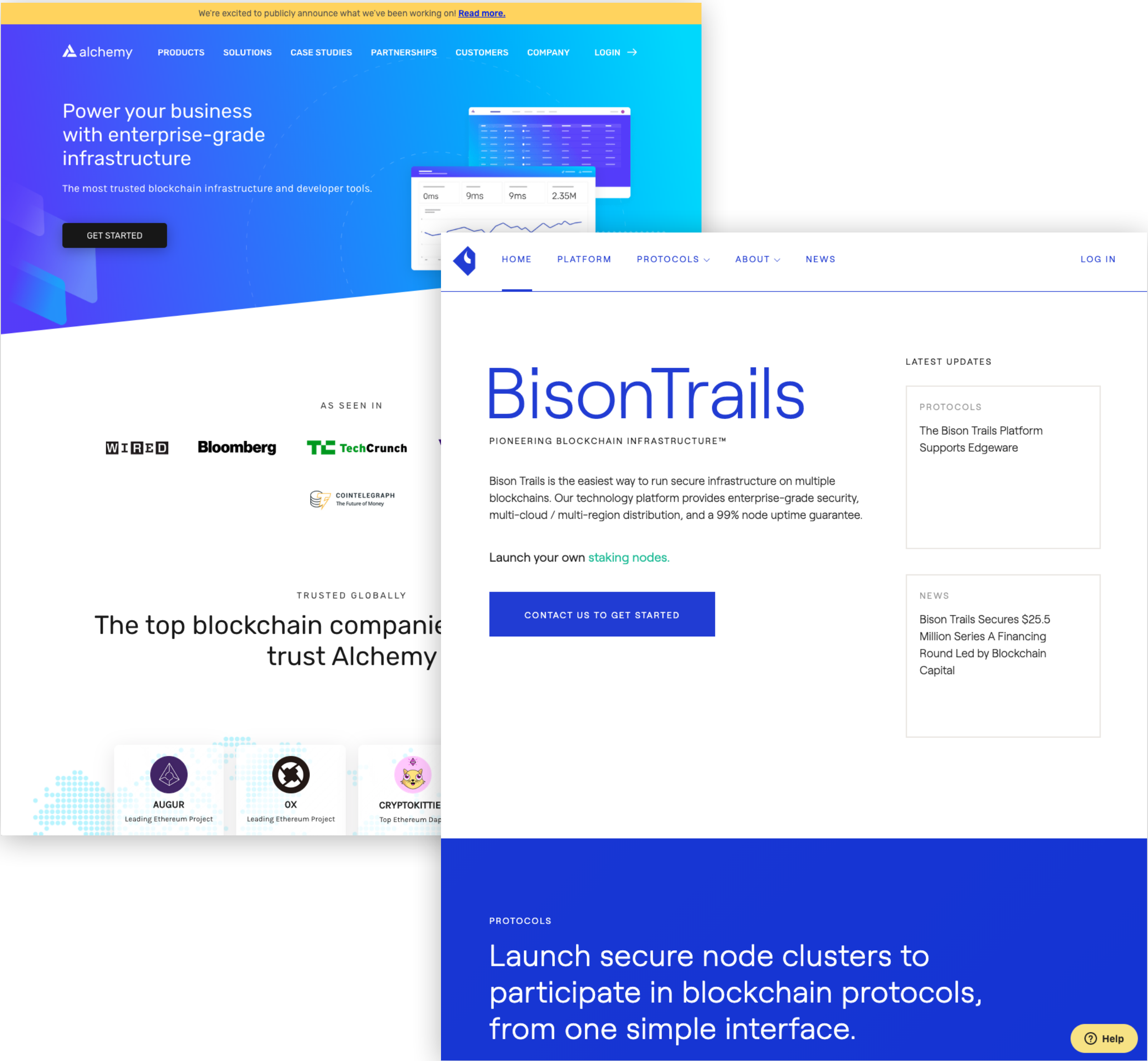
Clients for dApps

A Coinbase-like UX whose backend is a blockchain or smart contracts.



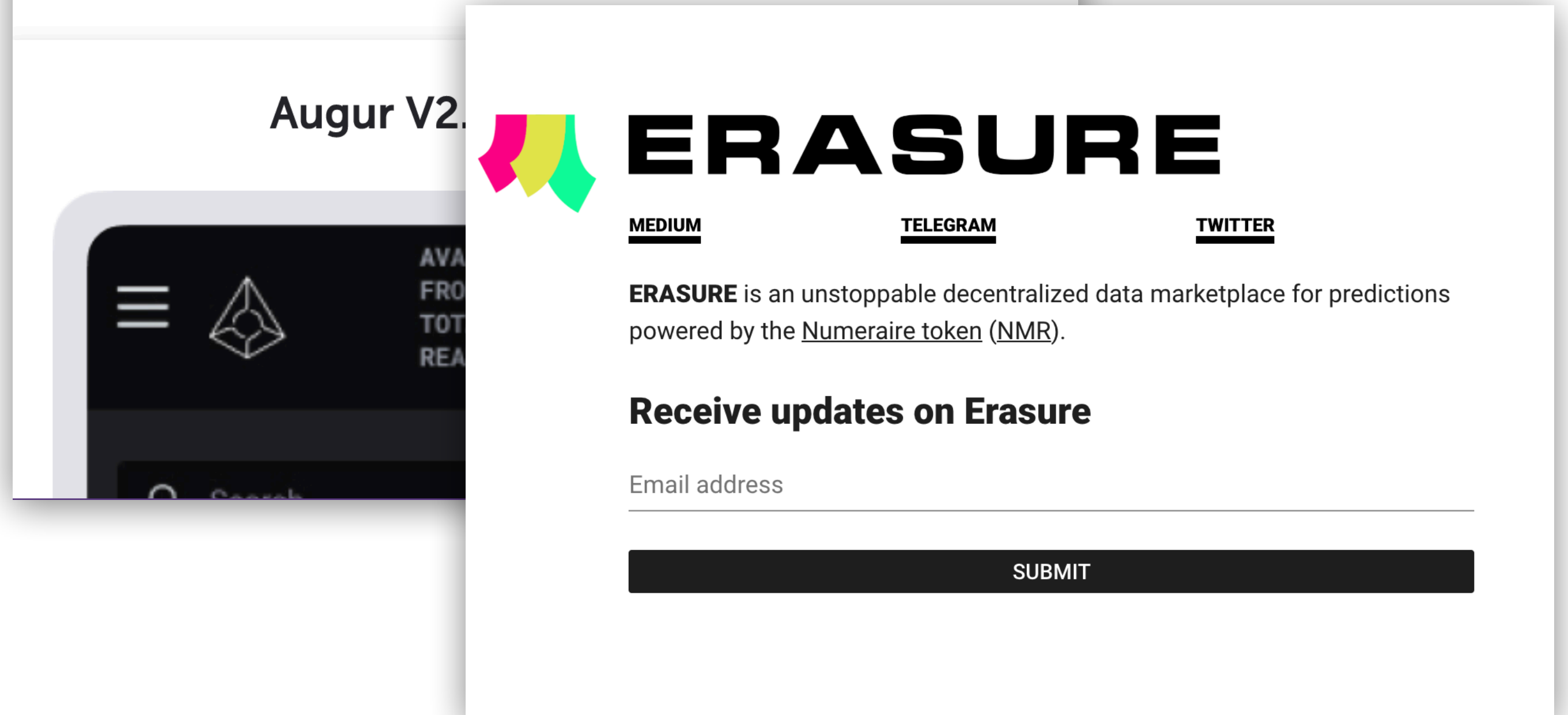
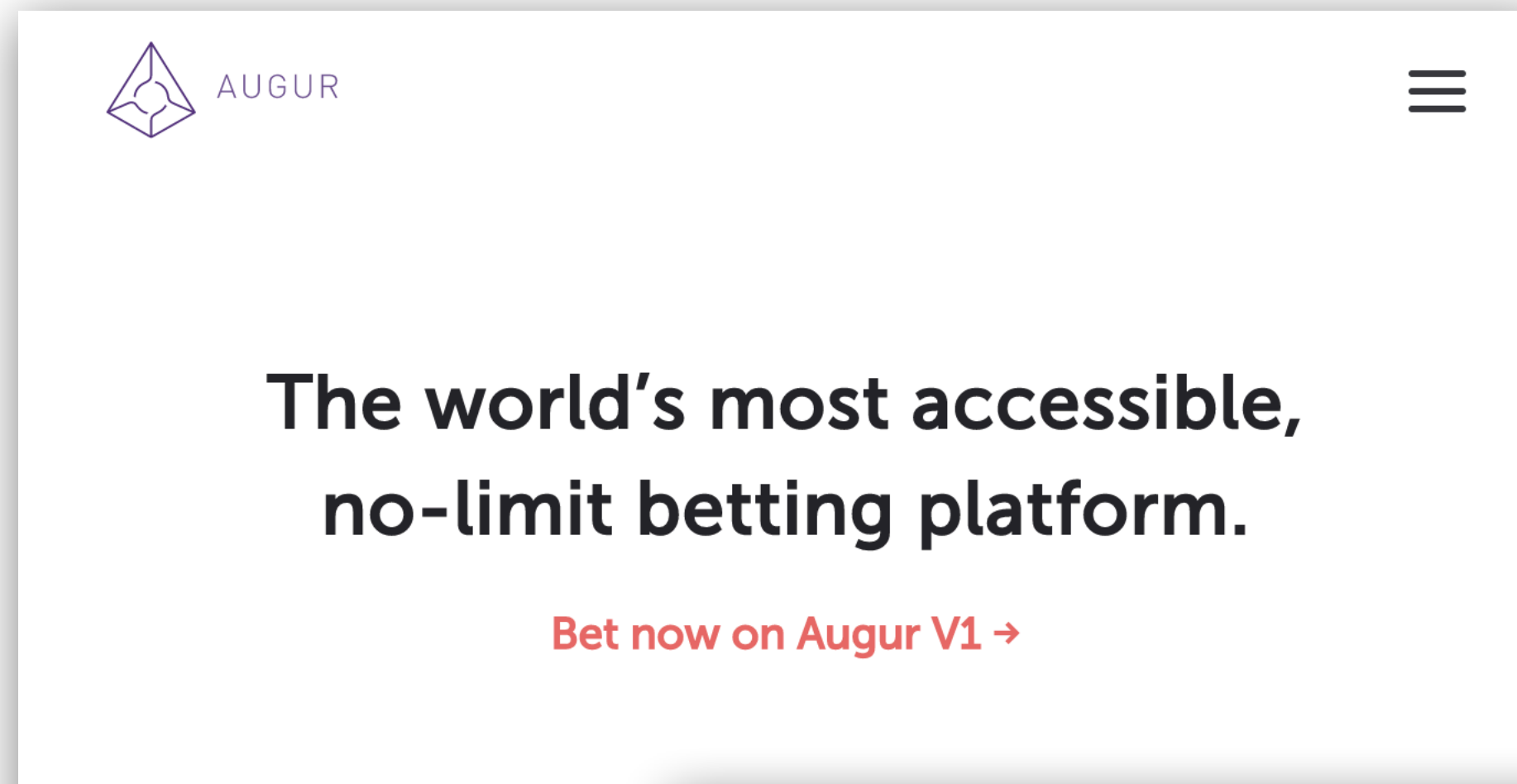
Developer Tools (Alchemy, Bison Trails)

Improved APIs for geth and general performance improvements.




Oracles and Prediction Markets

Put data on-chain and make bets on it.



DAOs—Decentralized Autonomous Organizations

Semi-autonomous programs—many of which make you money. Trading on dexes is pure internet arbitrage.




Jesse Walden

@jessewldn

DAO: "an entity that lives on the internet and exists autonomously, but also heavily relies on hiring individuals to perform certain tasks that the automaton itself cannot do."

"Automation at the center, humans at the edges"

—@VitalikButerin (2014)




DAOs, DACs, DAs and More: An Incomplete Terminology Guide

One of the most popular topics in the digital consensus space (a new term for cryptocurrency 2.0 that I'm beta-testing) is ...

[blog.ethereum.org](#)

7:52 PM · Jun 3, 2019 · [Twitter Web Client](#)

19 Retweets 85 Likes



Jesse Walden

@jessewldn · Jun 3, 2019

Replying to @jessewldn

impressive, clear taxonomy of the types of economic arrangements and organizations that can be built on blockchains.

Internal capital		No internal capital	
Automation at the edges	Humans at the edges	Automation at the edges	Humans at the edges
Automation at the center	AI (holy grail)	Daemons	DAs
	DAOs		DCs
	DOs		
Humans at the center	Robots (eg. assembly line)	Web services	Forums
	Tools		
	Boring old organizations		

15

48

Crypto Trading Bots - The Definitive Guide For 2019

August 20th 2019 [TWEET THIS](#)

Introduction

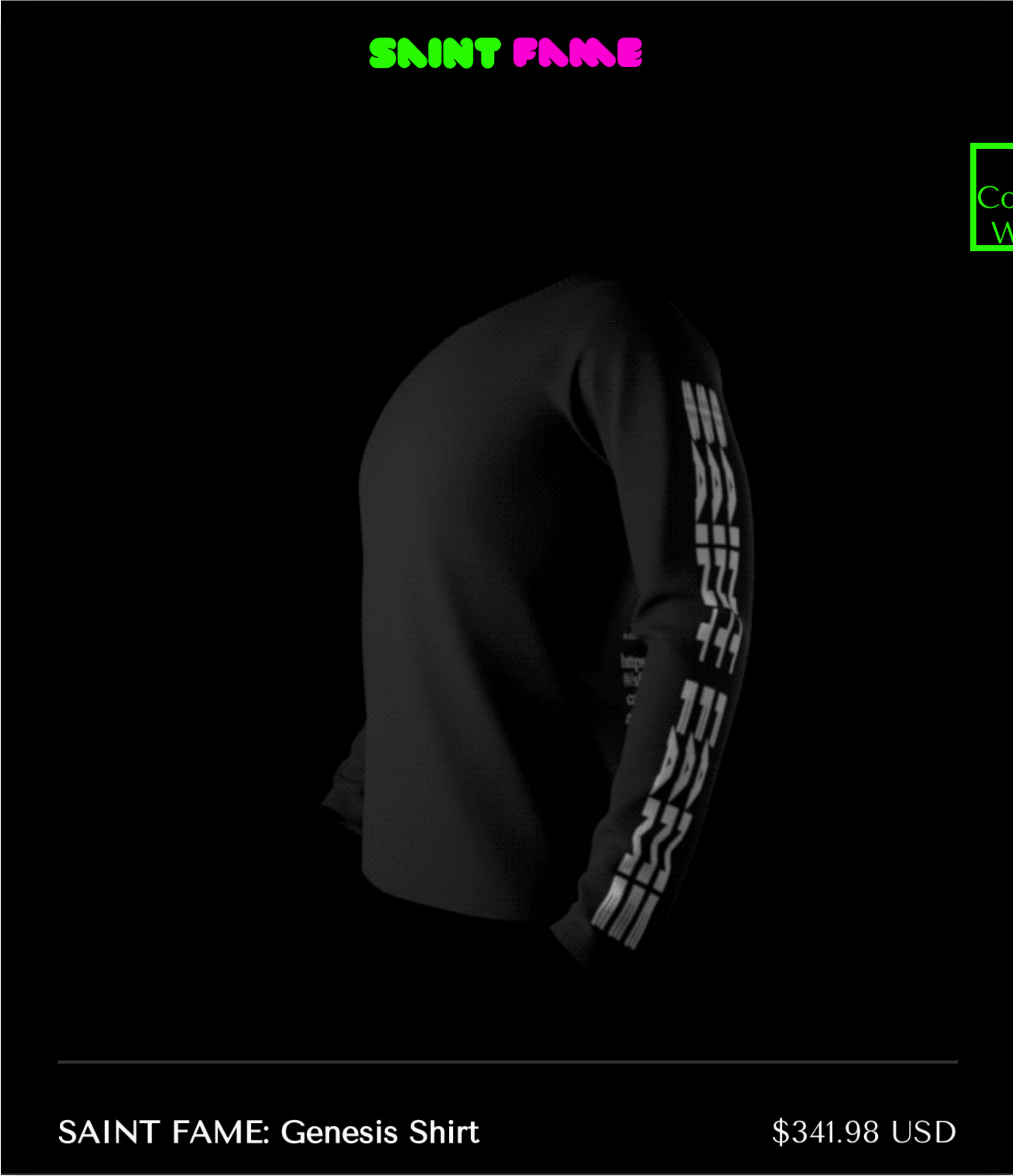
As technology in the 21st century has developed at a rapid pace, never seen since the industrial revolution, we have begun to see major changes in the way that individuals trade and how people view currency in general. Even with cryptocurrencies themselves, in 2010, they weren't very prevalent and they had a very limited scale for trading. Since then, cryptocurrencies have exploded in popularity and more people are trading them than ever.

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Community-Owned Organizations

Collectives, akin to cooperatives, owned and operated by their users.



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[CRYPTO STARTUP SCHOOL]